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Visual Instruction News

MAR 23 1933

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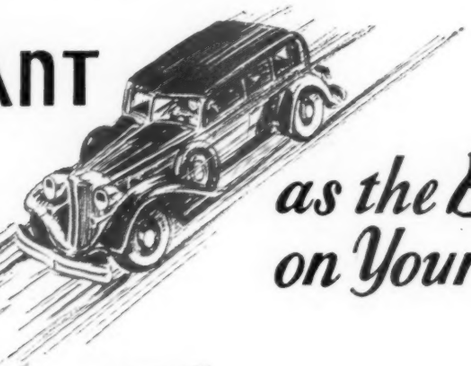

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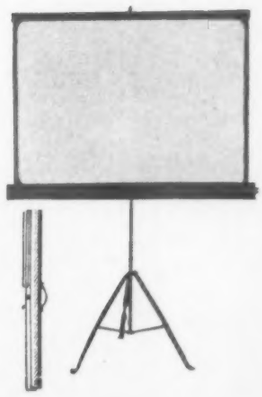

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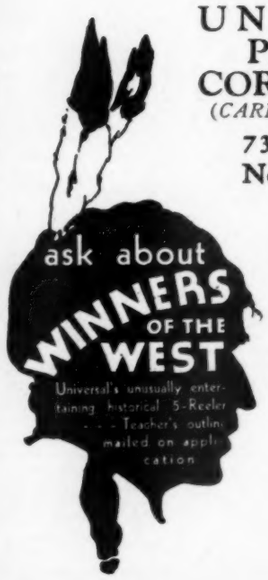
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VOLUME XII NUMBER 3

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EDITORIAL

THIS issue goes to press just after rich America has lifted its ever-to-be-memorable bank moratorium. In the brief period since, certain favorable indications are multiplying rapidly. This country seems to be reaching definite conclusions regarding the nonworthwhileness of chronic "depressioning," and emphatic decisions regarding the resumption of constructive activity. When one has wallowed long enough one merely gets up, cleans up and moves on. It has been a long wallow. Now for the wallop!

IF WE ever had any doubt as to the need of a magazine for informative purposes in this visual field, letters like the following would dispel said doubt instantaneously. This one was sent by a School Superintendent, in a state notably progressive in education, to his State Director who is notably efficient in his work in the visual field. The writer's name is mercifully omitted.

"Dear Sir,

"Since the adoption of Visual Education in the Schools of ....., I am rather anxious to know what the minimum requirements are. We have been having on an average two reels of educational pictures each week. Occasionally a company sends us three reels. In order to save varied interruption in classes and extra operations, and through the fact that our films have been quite educational and adaptable to various ages, we assemble grades and high school together once each week for this visual education.

"Now, the reason for the above explanation with the subsequent inquiries by me is that a member or two of our Board of Education wonder if we don't have too much visual education, and whether or not it is as valuable as Arithmetic and other subjects since pupils do not get credit for it.

"The thing I should like to have from you is a statement denoting: (1) About the amount of visual education that you require. (2) A statement of approval of our present plan, if acceptable. (3) Additional suggestions you think advisable."

We are indebted to the live-wire Director for sending on to us this pitiful masterpiece of abysmal noncomprehension, with his own comment of "Ye Gods!" We agree utterly. And as long as there are still thousands, in positions of authority in the educational field, who are capable of such so-called thinking on the visual idea, THE EDUCATIONAL SCREEN must go on. It has an unlimited job to do.

ANOTHER letter comes direct to us from a subscriber who has read the last two issues only, out of our eleven years or more of publication. We learn that we look like the "trade organ of motion-picture supply houses. No government films are listed, although the magazine '.....' finds material to list. No travel films are listed, although good ones are at hand. I have seen excellent ones in theatres, 'The Bay of Naples' and 'The Blue Danube' recently. Thirty commercial films are listed in one number and thirty-three in the other. Seven of them are for children. That is, ninety per cent of your page is used for non-educational material. I question the pedagogical value of such a list. I regret the waste of space that could be used to list the things I should like to learn about."

This is by no means the only correspondent to put us in our place regarding attention given to "theatrical films." And such defense as we offer in our replies doubtless seems quite feeble to these correspondents. We can but remind them that we furnish detailed information on thousands of non-theatrical films annually, in the magazine and in 1000 *and One Films,* from every known source in the country; that these films are listed, classified, reviewed or summarized, and the exact source given where they may be had; that the non-theatrical material given by the magazine mentioned has been printed by us six months to six years ago and much of it many times over; that all the non-theatrical films, carefully reported to us each year, by all known producers and distributors for the past ten years, stand safely and accessibly in our files of tens of thousands of cards.

The charge of "waste of space" involved in printing theatrical movies "not for children," instead of wholesome travelogues, interests us still more. We suspect that it is an infinitely greater service to any child to spare him seeing those fifty-six undesirable movies than to show him the Bay of Naples. In fact, we could name many among the fifty-six, any one of which will do more permanent harm to a normal youngster than fifty-six Blue Danubes could possibly counteract.

ANOTHER correspondent, however, finds our Film Estimates still more objectionable—and for the opposite reason—seven recommendations out of sixty-three apparently stamping us as a tool of the Industry. The Film Estimates are syndicated in various publications, including certain outstanding magazines in the Church Field. This correspondent asked two of the latter if they were "paid for running those Film Estimates" as an advertising service to the Industry(!!), received no answer, and asks us. Our only suggestion would be that the correspondent, in a particularly brave moment, asks the Motion-Picture-Industry to pay for reprinting the Film Estimates anywhere—and hear or feel their answer.

NELSON L. GREENE

Adapting Visual Aids to Class Routine

I. Preparation of Visual Tests

CLYDE STEWART

A GREAT many commercial films, slides and film slides are unfit for classroom use. They are primarily advertising medium material which oftentimes does not fit in with the class work, is not available at the time it is needed, or is not organized and written up from the pedagogical point of view. These objections have caused visual material to fall into disfavor among some educators. A careful use of right visual material will pay large dividends in student motivation and learning. In these articles I am attempting to sketch briefly some ways of using visual material more effectively and some ways of making improved visual material. (The cost of materials is comparatively low.) My illustrations are based on the teaching of science but might be applied to agriculture, history, or some other branches of work.

To combat the entertainment idea that a few students have regarding screen visual material, tests should be given on all material the same as on the regular class work. I think a carefully prepared test should accompany every box of slides, film slides, and motion picture film. Students should be urged to take notes on the material. This promotes closer attention to details which might otherwise escape their notice.

There are several methods of testing that can be practiced with slides or film slides. Our method is to project material on to the screen, having students answer questions about it orally or on paper in the semi-darkened class room. The views can also be projected on a blackboard, the pupils writing with chalk directly on the pictures or diagrams. For instance, suppose you were teaching the location of certain important geographical centers. A blank map of the United States can be projected on the blackboard and pupils asked to step up to the board and write in names of the important cities or states. In all forms of testing with a projector too dark a room should be avoided. If the projector is not suitable for semi-darkness such testing methods are perhaps questionable.

Another method that can be used successfully is to set up the projector after school and project a diagram on to the blackboard, then, while the image is on the board, trace it in with chalk leaving out certain essential points. Oftentimes some student from another class who is interested in drawing will do the tracing for the teacher. Parts of the diagram are then labeled or numbered and it can be used the next day as the basis of a test. (See the diagram and test Figure 1.)

Tests from film slides can be placed on a mimeograph stencil with much the same method. If the projector has a lens mount that will permit the lens to move forward quite a distance so a small image can be formed, this image can be projected on to a mimeograph stencil or duplicator paper and traced in. Thus a great number of copies of the test can be prepared. If the students are then required to put their answers to questions on a separate sheet of paper given and saved for next year's work.
the test questions can be collected after the test is

With lantern slides the diagrams are often large enough to be transferred directly to the mimeograph stencil without enlargement with the projector. This can be done very easily by putting the slide up to a window with the stencil over it. Enough light will shine through so one can trace the diagram. The whole test should be made largely or entirely objective, whenever possible, to simplify the marking

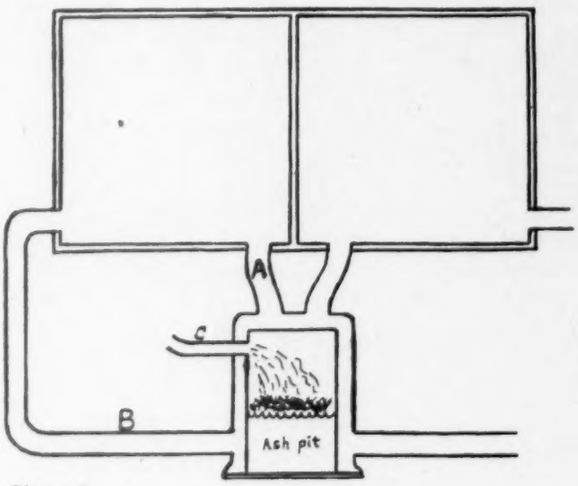

Figure I

of papers. When the tests are to be used year after year a teacher feels justified in spending more time and making up tests carefully. Such tests should be carefully filed for future use.

Below is given an example of a blackboard or mimeograph test that makes use of a partly completed diagram given in Fig. 1.

A Visual Test on Heating Plants

1. The heating plant illustrated above is (1) a pipeless system (2) a pipe hot air system (3) a steam system ....
2. The air at (A) is moving (1) up (2) down..... .....
3. The air at (A) is (1) hot (2) cold (3) average temperature ....
4. The air at (B) is moving (1) to the right (2) to the left..... .....

5. The circulation of the air in this system is described by scientists as a ..... current.
6. Is there any connection between pipe (C) and pipes (A) and (B) Answer yes or no.....
7. Is this system of heating cheaper to install than a steam heating plant? Answer yes or no

.....

Many of the questions will tie up with the text book and it is desirable that text material should be taught before the visual work is given. This test was used for a daily quiz with a diagram traced on the board.

II. Making Photographic Copies of Visual Material

If a teacher has an elementary knowledge of photography[1] a great deal of visual material can be copied for permanent use. Permission can be obtained from the producers in most cases to make photographic copies when they are not to be sold. By copying slides and film slides a school can build up a permanent visual library and material is then available at a moment's notice. The expense of copy material is not very high. A cheap photo-finishing outfit can be purchased for as little as two dollars. With this outfit, and a projector, most of the things described in this article can be accomplished. It is quite possible, of course, to do better work and get special effects by further study and more equipment.

Suppose you wish to make copies of some valuable lantern slides. You can buy from a photo supply house some lantern slide plates. They cost about 50 cents a dozen. These are unexposed glass plates with a surface that is sensitive to light. With the aid of your photo-finishing dark lantern a package of these plates can be opened for use in a dark room. Any room can be used at night, of course. The procedure for copying a slide is much the same as used in making a photographic print on paper. The slide to be copied is placed in the printing frame with the cover glass up. If there is printing on the slide it will be readable from the back of the frame. When the slide is in this position it will bring the emulsion surface very close to the emulsion of the unexposed slide. If the exposing light is placed at least ten feet away from the printing frame, a fairly sharp copy can be made. If a sharper copy is desired the cover glass of the slide must be removed so that the two emulsion surfaces lie in actual contact during the printing. The unexposed lantern slide is laid on top of the slide with the dull side down. (The side that appears dull by reflected light is the sensitive side or the emulsion side as it is commonly called.)

The frame is then clamped together and exposed to a white light for a time of five to twenty seconds. This time of exposure must be found by experiment and will vary considerably according to the density of the slide, intensity of the light and its distance away. In general it is best to use a twenty-five watt bulb at a distance of about ten feet. After some experience the exposure can be judged fairly well.

The slide is then ready for development. There are a number of developers that can be used depending on the nature of the material to be copied. If one does not care to mix developers they can buy a prepared developer called nepera solution. This developer is easier to mix than the common tube of powders. It can be used for all of the work described in this article. Better results can be obtained where diagrams are to be copied by the use of special developers such as the Eastman D-9 line developer.[2] The slide should be developed for about one to three minutes. If the exposure was correct the development will be complete in about two minutes. Some trials will be necessary to tell when exposure and development are correct. If the slide becomes unusually black it indicates that it has been exposed too long or developed too long. Conversely if the slide is too transparent it indicates that not enough exposure or development was given.

As soon as the slide is developed it should be rinsed in water for a few seconds and placed in a fixing bath. The fixing solution comes with the photo-finishing outfit. More fixing solution can be purchased quite cheaply from dealers in photo supplies. The slide should be left in the hypo fixing bath until the yellow unexposed part of the surface has dissolved away. This requires about three or four minutes. No damage will result however if the slide is left in the bath for a longer period. It is well to allow the slide to fix for some time after the visible yellow has gone to be sure that it is completely dissolved. After fixing, the slide should be washed in running water for about fifteen minutes. It should then be set up on edge to dry in a fairly dust free room.

It will be observed that everything that was black on the original slide is now transparent on the copy. In other words we have a negative of the original slide. To get a positive the negative slide must be copied using the same procedure as before. This will reverse the blacks and whites and give a slide like the original. If diagrams are copied the negative slide can just as well be used because it makes little difference if the blacks and whites are reversed.

After the slide is dry the emulsion side can be covered with a cover glass and the two glasses bound together with lantern slide binding tape. This protects the emulsion from becoming scratched with use.

1. One of the best books for elementary use is "The Fundamentals of Photography" for sale by The Eastman Kodak Co. Price $1.00.

2. Formulas of various kinds are fully described in "Elementary Photographic Chemistry" for sale by The Eastman Kodak Co. Price 50 cents.

If the slides are carefully handled, however, binding is not necessary.

The negative slides can be used to make prints on paper by putting photographic printing paper over the negative and exposing to white light in a printing frame as before. With paper the exposure must be many times that required for lantern slides. The printing frame can be exposed for five or twenty seconds a few feet from a one hundred watt bulb for the average negative. The development and fixing process is much the same as before except fixation will require fifteen or twenty minutes with paper. Washing should also be somewhat longer, about twenty minutes at least. The paper can be dried by laying it face down on towels, or a glossy finish can be obtained by drying it face down on ferrotype plates prepared for that purpose. The paper should be placed on the plates and covered with an old newspaper to absorb the water. A roller should be run over the newspapers to press the paper firmly against the plate and remove the excess water. The plates are then allowed to stand in a warm room until the paper dries. It will then pop off the plates by itself.

A great many uses will be found for the paper copies. Since they can be produced cheaply they can be handed out for study or posted on the bulletin boards for observation. They also furnish excellent means for review or make up work. If a student misses a class in which a visual lecture was presented the main points can often be given to him by the use of these paper copies and the manuscript. The present tendency in visual work is to present only a few well selected slides at a time with more intense study of the material, hence the number of copies made will be fewer. Large copies made as described below can be framed and hung on the wall if so desired. For instance a good picture of Thomas Edison placed in the middle of a large picture frame and surrounded by smaller pictures showing various phases of his life and some of his many inventions will furnish study for some time. A short typewritten account of his life and work can also be put into the frame with the pictures. Such pictures lend atmosphere to a classroom. Some students may also want small copies of some pictures or diagrams to paste in their note books.

(To be concluded in April issue)

The Use of Motion Pictures to Promote Community Relations

O. H. OLDFATHER

SAINT DAVID, Arizona, is a rural community of about five hundred population located about sixty miles from Tucson in the Northwestern part of Cochise County.

The need of entertainment and recreation is similar to that of other rural communities similarly located at distance from theatres and other entertainment. There is no motion picture theatre nearer than Bisbee, forty-five miles away or Tucson, sixty miles away.

Last May the local school board gave its consent to the District's purchase of a 16 mm. projector. It was understood that the projector was classed as a non-essential in a time of economic stress but the Board agreed to issue a warrant in full with the understanding that other school activities should contribute toward the repayment of the expenditure.

The price of admission was an item for consideration. It was planned to charge an amount only sufficient to pay for the films. It had to be low enough to permit most of the people to attend each week. Ten cents for individuals and fifty cents for the entire family, was agreed upon. The picture, the machine and the price evidently met with universal approval since every Saturday night since the first feature on May 13, 1932, about one hundred and fifty people have attended the show.

At the price of ten cents for individuals and fifty cents for families it was soon discovered that there was an excess amount each of from two to five dollars each week. Recently the family rate has been reduced to forty cents with still a substantial profit each week.

The films were, until recently, rented from a film library in Los Angeles. A five or six reel feature with a one or two reel comedy, or travel, or scenery, cost on the average about twelve dollars, including transportation costs. Such features as the following proved very popular: *The Covered Wagon, Behind the Front, The Red Raiders, Code of the Sea,* and any picture featuring the dog, Rin-Tin-Tin.

The weekly community show has great value in promoting pleasant cooperative spirit and good will in the community. People have opportunity to visit or to exchange greetings before the show which occasion they often would not have otherwise. Then, too, there is created a common ground of interest and conversation. Films of local boys' projects in Agriculture have been shown which created added interest and pride in the local enterprise. This stimulates others to attempt similar projects.

The real purpose of the film service to the community, namely, to provide clean entertainment, educational pictures to students, recreation, a distraction from the cares of the economic situation, and to create a consciousness of social-interdependence has been highly realized in this project thus far.

Broadening the Horizon of Visual Instruction

W. BRUCE ADAMS

TO THE pioneers in the field of visual education, the intense interest now being evidenced by teachers in the use of the numerous visual aids must be a source of great satisfaction. No longer can the employment of motion pictures, stereographs, models, and the like, be looked upon as a passing fad, for their value in creating vivid, lasting impressions has been scientifically proved, by both research and practice.

The very fact, however, that so many converts are being added to the ranks of enthusiasts makes it imperative that those to whom they will look for assistance should themselves have a broad, unrestricted knowledge of the field.

Although it may savour somewhat of impertinence, the writer ventures to suggest that perhaps too much emphasis has in the past been placed upon the solely "visual" type of aid, to the neglect of another extremely important type which may be termed "auditory" aids. These include the phonograph, the radio, sound equipment and the like. It is true that these have been accorded quite as enthusiastic support as have visual aids, but the tendency on this continent has been to treat them as fields that are entirely separate and distinct.

In this age of specialization it may be asked why the visual educationalist, whose field covers a great number of teaching aids, should encroach upon that of the aural educationalist. The answer is simply that it is extremely hard, if not impossible, to find any definite line of demarcation between the two. Indeed, in some cases, they are combined, as witness the talking-picture, where the visual appeal is amplified by the aural.

Consideration of the talking-picture brings us to another point. If, as seems probable, the installation of sound equipment in schools is to become more common, will it be necessary for Boards of Education to depend entirely upon outside engineers for advice, or would it not be reasonable to expect that the Director of Visual Education should be qualified to act in an advisory capacity? It must be remembered that properly designed sound equipment will perform many more functions than the projection of talking-pictures. A trained educationalist who understood sound reproduction would obviously be in a better position to give advice on school installations than would a sound engineer not conversant with educational problems.

There is another reason for considering visual and aural aids as being in the same category. The results of experiments designed to test the efficacy of visual aids seem to point to them as being particularly valuable in the teaching of backward pupils who lack the mental background necessary to acquire definite impressions from the spoken word. On the other hand, the aids that are limited to the aural appeal seem to benefit the brilliant pupil, whose interests are surely as important as those of his less gifted classmate. The two types of aids would appear, then, to be complementary,—the visual aid supplying the dull pupils with the interpretation of the words used by the teacher, and the aural aid giving the clever pupils an opportunity to stimulate their imagination, and at the same time providing them with a means of escape from the deadening repetition needed to teach the slower section of the class. In this latter connection the radio is proving to be of great value, since considerable supplementary material can be brought to selected pupils listening either through headphones in the classroom, or through a loudspeaker in a special room.

The educational work being done by the two great broadcasting companies is conclusive proof of the value of this medium of instruction. However, to be of the greatest value, the lessons should be received in the classroom under normal teaching conditions, rather than in an auditorium. Such a procedure will necessitate the use of amplifying and distributing equipment, with loudspeakers in each room. Already several schools have installed such equipment, and are putting it to good use. The addition of a microphone and its complementary equipment opens up new ways of using the amplifiers, while the addition of a talking-picture projector and unsynchronized turntables still further enlarges its scope. Such equipment would enable a school:

1. To supply phonograph music for marching or drills.
2. To enable the principal to speak to all classes simultaneously.
3. To experiment with the various types of radio presentations such as dramatization, recitation, reading, newscast, concert, etcetera.
4. To permit class listening, under usual conditions, to educational broadcasts.
5. To permit the showing of talking-pictures.

The phonograph can perform a valuable function in the classroom, particularly in the teaching of music and languages. The foremost recording companies are beginning to issue records that will be useful in such subjects as literature (readings by

famous actors and actresses of well-known passages), science (talks by famous men), and history (music typifying certain periods). The modern phonograph has a tone sufficiently large to fill a classroom, with an entire absence of the "tinny" sound which successfully spoiled most lessons with the old machines. Furthermore, it can use the new long-playing records which make possible the recording of entire scenes or plays. Already the phonograph is extensively used in subjects for which records are available, because it has one unique power—that of repeating over and over any desired selection or part of a selection. The advantage of this in the teaching of a foreign language, for example, is obvious.

A new field of interest closely allied to the phonograph is that of home-recording. Up to the present, the results obtained from making records on aluminum or composition discs have scarcely been of professional quality, but the latest machine designed for this work does give reproduction that is quite good. The near future should witness the appearance of a recording machine that will enable the teacher to make a permanent collection of outstanding compositions, musical numbers, and the like.

The aforementioned teaching aids do not exhaust the list by any means, but since the purpose of this article was merely to awaken interest along these lines, perhaps enough has been written to accomplish this end. Now comes the problem of choosing a name that will embrace the many types of aids that are in use. The term "visual and aural aids" seems rather awkward, although it has been used. In England the term "mechanical aids to learning" is used, but this too is open to criticism. Perhaps best of any that have been suggested is the term "sensory aids".

However, to the practical teacher, the name is a matter of small importance, and the choosing of it can safely be left to those who enjoy arguing about such matters. What really is important is the knowledge each teacher possesses regarding the many aids that can be put to good use in the classroom. As has been said, the field is a broad one, and will require considerable study, but quite apart from the fact that the use of such aids will result in vitalized teaching, the experimenter has the added satisfaction that he or she is travelling along uncharted, or at best meagerly charted, paths —paths where one's own ideas are quite apt to be as good as those of any other experimenter, and paths that show every evidence of leading toward the teaching of the future.

The Educational Museum

(Concluded from February)

ARNOLD W. REITZE

ANOTHER phase of the work of an educational museum is in regard to docents or museum instructors which may be provided for the most effective use of the educational museum. The duties of such docents are to conduct lessons at the educational museum center through the use of the illustrative material available at the center. Such lessons may take the place of a regular school lesson which is transferred to the museum merely because of the available material. Again, they may be lessons on topics of general interest but not necessarily in the course of study. The lessons may be given during regular school hours, which is the usual custom at an educational museum, or they may be given outside of school hours. It is the duty of the museum instructors to cooperate with the individual teachers to the fullest extent in arranging such lessons as will be most worthwhile to the pupils. A more limited form of docent service is in furnishing docents or guides, who are thoroughly acquainted with the educational museum, to conduct classes through the various sections. Such guides do not do any actual teaching but leave such matters to the class teacher. Such service is highly desirable for the most effective use of the educational museum. There is usually a need for both types of services, namely the docent or museum instructor, and the museum guide.

The educational museum should provide an opportunity for the training of teachers in the effective use of the material available at the center. This may be done through a regular teacher's training course conducted at the educational museum or through teachers meetings conducted at the center. Full opportunity should be given for any individual teacher to obtain such information and assistance as may be needed for the best use of the educational museum's facilities. All teachers should be encouraged to make their needs known to the museum in order that material which is most worth-while can be obtained.

The educational museum should cooperate in establishing friendly relationship between nearby museums and the schools for the mutual benefit of the museum and the schools. In this way the schools may receive the advantages of the collections which are probably far more extensive than it is

possible or desirable to set up at the educational museum center.

The educational museum can render much valuable service to the school children after school hours through many different activities. One of these activities, which is used quite extensively, is the "story hour" at which time a story is related, based on museum objects or exhibits. These stories may take the form of single unrelated stories or they may be in the form of a series of related stories. Museum games in which the children study the exhibits and then answer a series of questions based on them is another device used frequently. In both of these activities a reward, such as a picture or booklet bearing on the subject studied, may be given for the successful completion of the answers. Such service is usually given by the docents or museum instructors after school hours or on Saturday. Such service has many desirable and valuable features which make it well worthwhile. It is a means of giving information of a worthwhile nature to those whom are interested enough to attend the educational museum after school hours and it is also a means of developing a worthy use of leisure time. The educational museum may also become a center for various types of clubs as nature study, stamp, photography, geology, or mineralogy clubs. Such clubs should be supervised by the museum docents, but they should be run by the children. A room at the center may be set aside for the use of such groups as Boy Scouts, Campfire Girls, and similar organizations who are interested in nature study or in related fields. It is also possible for the museum docents to conduct field trips to nearby points of educational value.

The educational museum may arrange for illustrated talks on general scientific subjects, which might be given by members of the school's teaching staff. In most school systems it is usually possible to find teachers who are familiar with certain scientific subjects, either through teaching or as a hobby, who would be pleased to give such talks. They might be on such subjects as Weather, Astronomy, Animals, Photography, and other similar subjects and presented not from a highly technical angle but from the popular viewpoint. These talks may be given to groups of pupils as well as to the general public. In presenting such lectures however, care must be exercised in the selection of the speaker in order that he may give only information which is authentic. Illustrated talks can also be given for the benefit of the public, on the activities of the schools. By these means it is possible to establish the museum as a cultural influence for the public at large.

The educational museum center should also serve as a place to display the various materials which are available for the use of the teachers. Such a display would serve as an illustrative catalogue where all the material could be actually seen by the teacher and thus make it possible for the teacher to more fully realize what material is available and just what material she could use to advantage. It should also serve as a center to display and demonstrate newly acquired material. Exhibits can be made from time to time of ways in which the museum material is actually used in the schools and for showing teachers how they may make exhibits for their own particular need and use.

While an educational museum is primarily for the benefit of the schools, the public in general should be made welcome at the educational museum center and be given an opportunity to make such use of the material as can be done without interfering with the major work of the museum. This is especially desirable in those communities which have no regular museums. There are many opportunities for an educational museum to be of real service and value to the community at large. It may well serve as the contact point between the schools and the public through exhibits and lectures pertaining to the work of the schools.

Through contacts with the public it is often possible to receive considerable aid through gifts of collections or of money with which to further the work of the educational museum. However, care must be exercised in the acceptance of such gifts of collections to prevent the educational museum from becoming a depository for all sorts of odds and ends which may have little educational value. The acceptance of all gifts of collections should always be upon a written agreement that the museum shall have full power to use or dispose of any or all parts of such collections, if in the judgment of the museum it is to its advantage to do so. Such disposition may be made through sale, exchange or gift, but in any event any article acquired in its place should be credited to the first donor. In the case of money donations its acceptance is usually dependent upon the legal points which may be involved regarding public institutions and gifts of money. However, there is usually some legal opening which makes it possible to accept such gift. Gifts of this nature may well be used to set up a certain section of the educational museum, and the donor of the money can be given due credit.

There are certain other functions, such as, the distribution of slides and films which under some types of organization might be part of the educational museum. However, no attempt has been made in this article to include all possible functions of an educational museum or those functions which

(*Concluded on page* 76)

GOVERNMENT ACTIVITIES IN THE VISUAL FIELD

CONDUCTED BY MARGARET A. KLEIN

Industrial Exhibits

(Concluded from February)

A MINIATURE colliery and coke plant, the gift of the Consolidated Coal Company, well illustrates the operation and setting typical of the bituminous mining industry in general. The machinery is in operation for three minutes every quarter-hour. Another colliery model, the gift of the Pittsburgh Coal Company, is an actual reproduction of the first pool No. 2 at Willock, ten miles from Pittsburgh.

In the show cases are actual articles showing the equipment used by the miners. There we see the miner's first aid kit; the miner's self reserve, a breathing apparatus which will permit him to breathe in spite of carbon monoxide in the air following an accident; the miner's "hard-boiled" hat, made stiff to protect the miner's head from falling rock and coal fragments; and miner's safety oil lamps with magnetic locks which permit them to be opened in the mine and with sparking igniter which permits them to be relighted without being opened.

The mining and preparation of commercial salt from the time it is taken from the salt well to the pan house where the water is evaporated off and then through the various refining processes, is demonstrated in a model donated by the Worcester Salt Company.

A pictorial chart in which a tree is used as the medium for showing the derivation and uses of soda, forms an interesting as well as a very useful part of the exhibit donated by the Solvay Process Company of Syracuse, New York. A soda manufacturing plant completes the exhibit. I should like to mention, in connection with this exhibit, that the explanations of the various steps in the display are very well expressed in the accompanying placards.

From the forest to the newspaper is the theme of an exhibit of the wood pulp and paper making industry. The complete process is pictured including the cutting of the trees, floating them down the river to the mill where they are cut into small pieces, the barking, grinding, the sulphur process, the digestor, and finally the paper mill and shipping the finished product.

Another model worth mentioning is that of a wood preservative plant for creosoting railroad ties, etc., in a vacuum tank. Nearby is another exhibit showing the complete process of manufacturing turpentine from taking the sap from the trees to the distilling and packing of turpentine in barrels.

The National Lead Company has provided a very interesting model showing the process of making white-lead as used in paint. White lead is made by corroding metallic lead in clay pots, the corroding agents being acetic acid and carbon dioxide. The acetic acid (practically vinegar) is placed in the clay pots with lead pieces, and the carbon dioxide gas is generated by the fermentation of spent tan bark in which the pots are buried. The process takes about four months to complete. In order to expose a large surface of lead to the action of the corroding agents, the lead as received from the smelter is melted and cast into perforated discs about five inches in diameter and one-eighth of an inch in thickness. These are called buckles. About a dozen buckles are placed in a clay pot with a small portion of weak acetic acid. Hundreds of these pots are packed closely on a level bed of tan-bark. A loose board flooring is placed over the pots, then more tan bark, more pots, another floor, etc. until the entire room is stacked to the ceiling with the pots of buckles. Fermentation of the tan-bark starts immediately and generates heat up to 180 degrees, Fahr. This heat causes the acetic acid to volatilize. Its fumes attack the lead buckles changing the surface metal to a thin film of lead acetate. At the same time the fermentation of the tan-bark produces carbon dioxide gas which acts on the lead acetate and converts it into lead carbonate, which is the white lead of commerce. The chemical process now repeats itself. When the film of lead acetate is attacked by the carbon dioxide gas, the original acetic acid is set free and this then acts on the pure metallic lead beneath the first film. This in turn is converted into lead carbonate, etc., until the lead buckles have been entirely corroded.

Every step of the process from casting the buckles, packing the pots and filling the rooms is shown. Next, we see the process of emptying the jars of the corroded buckles, the grinding of the lead carbonate water, drying, sifting through fine screens of silk bolting cloth (with 27,000 perforations to the square inch) and finally grinding with linseed oil to make the complete Dutch Boy White Lead in Oil ready to ship to the paint maker.

One of the very complete manufacturing exhibits is that of a very commonplace but useful commodity, namely, the exhibit of woods and wood products. It is amazing to learn the number of kinds of wood used in manufacturing all sorts of

things and if it were not for the samples of finished and unfinished woods shown in this display one would be inclined to doubt it. The selection of the right kind of wood for a certain article is demonstrated by the exhibit of tennis rackets, base ball bats, and other athletic equipment shown in the display of A. G. Spalding & Bros.

How limestone rock and powdered coal is combined to make cement is clearly shown in the model cement plant, a gift of The Atlas Portland Cement Company. First, one sees the limestone rock in the ground, then the crusher house where it is broken into stones of one inch size, which are dried out, pulverized, and put into kilns and burned. The burned rock, called clinkers, is fed into coolers. Finally, powdered coal is blown into the kilns, gypsum is added and it is all burned together to make cement. The cement sidewalk assumes a new interest after one has seen this model.

From the pretty colored shingles on the roof of an attractive model of a bungalow to a lake of natural asphalt in Venezuela, is a decidedly interesting story told in the exhibit showing the uses of asphalt. It is a fantastic story but this is what the placards tell us, that this lake which is known as Pitch Lake and situated on the island of Trinidad just off the coast of Venezuela, covers 100 acres and has a maximum depth of 140 feet. It is constantly fed from an underground source and it has an overflow outlet. As the material comes up from the asphaltic springs below, it is an emulsion of asphalt, clayey matter, and water. The emulsion breaks down, the asphalt particles coalescing to a consistency similar to an asphalt pavement on a hot summer day. In adjoining cases may be seen samples of products made from asphalt, such as asphalt roofing shingles, pavement materials, moulded forms, storage battery jars, and samples showing how asphalt is used in paints, enamels, and printing inks.

There is neither time nor space to describe all the exhibits but I should like to name a few more in order that you may understand how completely the many industries are visualized in this museum.

Other exhibits include a model of a charcoal blast furnace; sulphur mining; land pebble phosphate mining as practiced in Florida; the manufacture of carborundum, alundum, and other abrasives; the Atcheson processes of carborundum and graphite manufacture, showing the electric resistance furnace that develops a heat of 4,000 degrees Fahr.; all kinds of textile manufacturing; the manufacturing of sewing machines; the various kinds of farm machinery; all sorts of transportation vehicles; the manufacture of buttons; in fact, almost every industry is represented in some way.

From the description of this section of the Smithsonian Institute, one can readily see that it contains a great many exhibits of interest to students of science, geography, and the social sciences.

I think a word of tribute should be said about the donors of many of these exhibits. It is realized that they are placed there by commercial companies but there is no doubt that these companies have made a decided contribution to education in general and to visual education in particular.

Contributors to this Issue

W. Bruce Adams, Assistant Master, Fern Avenue Public School, Toronto, Ontario.

Sue Bishop, Wollaston School, Quincy, Mass.

Ethel M. Hill, Art Department, Central Avenue School, Newark, N. J.

Margaret A. Klein, Children's Bureau, United States Department of Labor, Washington, D. C.

O. H. Oldfather, Superintendent of Schools, Saint David, Ariz.

Arnold W. Reitze, Department of Visual Instruction, Jersey City, N. J.

Clyde Stewart, Public Schools, Lancaster, Wis.

The Educational Museum

(*Concluded from page* 74)

might better be handled by some other department.

In conclusion, it would seem that an educational museum is very much worthwhile as an adjunct of any school system and that it can best be organized as a major division of a department of visual aids. It should be under the direct supervision of the director of the department of visual aids, or such a person whom he may designate. Its primary functions should be:

1. To provide objective material for the use of the pupils, both at the museum and at the individual schools.
2. To acquire and make up such models and exhibits as are essential to effectively teach the course of study.
3. To provide for teachers training in the use of museum material.
4. To provide museum instructors and guides for the effective use of museum material and exhibits.
5. To cooperate with other nearby museums for the use of such material as is not available at the educational museum.
6. To render the best possible service, first to the schools, and second to the community.

NEWS AND NOTES

CONDUCTED BY JOSEPHINE HOFFMAN

Visual Aids Service Urged for Nebraska

At the last Nebraska State Teachers Association meeting, held in November, the Committee on Radio and Visual Education advised the organization of a Visual Instruction Service, located in the Extension Department of the University of Nebraska, similar to that of other states, through which the necessary materials and supplies might be circulated in order that radio and visual education might properly function in the schools of the state. The Committee looks upon these two aids as means of enriching all regular school work.

At the present time the schools of the state are securing their visual aids from the Visual Departments of the University of Kansas and University of Colorado.

Report on Business Film Showings

According to information from the United States Department of Commerce, over 90% of a year's total attendance at business film showings are credited to 4 of 18 places of exhibition, namely, theatres, schools, exhibitions, and conventions. But, on a basis of average annual attendance per concern, show windows assume first place with an average attendance of 302,832. Exhibitions are second with 189,517 persons, and schools third with 158,308. The remaining 15 places of exhibition rank as follows: conventions, theaters, branches, foreign countries, churches, general meeting places, dealers conventions, clubs, factories, colleges, miscellaneous, trade organizations, stores, residences and offices.

Of the 1202 exhibition reports received over 99.5 per cent found the showings profitable.

S. M. P. E. Meeting in April

The regular Semi-Annual Spring Meeting of the Society of Motion Picture Engineers will be held at the Pennsylvania Hotel, New York, April 24 to 28. W. C. Kunzman, of Cleveland, Chairman of the Convention Committee, has appointed Herbert Griffin of the International Projector Company, Chairman of the Local Arrangements Committee and plans are already underway for the meeting. The meeting will cover five full days, due to the abbreviated convention held last fall and the mass of valuable material that has accumulated as a result.

The exhibition of newly developed equipment is expected to be of particular interest and magnitude since an entire year has elapsed since the last exhibition was held. Rear screen projection is expected to enter into the discussions. Interest in this development has been intensified by success of the Trans-Lux system. Bausch & Lomb also is understood to have developed a lense which is proving successful for this type of projection.

American Lumber Film Shown in Europe

For the past three years, the National Committee on Wood Utilization, in cooperation with commercial attaches of the Commerce Department, has arranged for the showing of the Long-Bell lumber film depicting the felling of the gigantic Douglas fir timbers on the Pacific Coast, their conversion into lumber in mammoth sawmills, and the application of this product to a variety of industrial and construction uses.

From all parts of Europe the National Committee on Wood Utilization has received grateful testimony from lumbermen, engineers, architects, builders, educators, and industrialists stating that this film has enabled them to visualize the problems involved to a far greater extent than they could before with their scant knowledge of American conditions.

There are hardly any virgin forests left in Europe, according to Axel H. Oxholm, Director of the National Committee on Wood Utilization, who supervised the showing of the film in Europe. The audiences were thunder-struck upon seeing trees 200 to 300 feet high falling before the axes of what seemed in the picture to be pygmy lumbermen. Gigantic, electrically operated machines tumbled these huge logs as if they were match sticks. They were carried on trains to the sawmills, and without the touch of human hands were cut up into lumber and timbers.

The greatest interest undoubtedly was shown in Germany, where the film was constantly circulated for more than a year and a half. Visitors from every corner of the globe heard of this film and requested to have it shown in their native countries. Thus the film was shown before governmental bodies, important educational institutions, and professional societies in England, Sweden, Norway, Denmark, Switzerland, Austria, Germany, the Netherlands, and other countries. The climax was a request from Oxford University where the film was shown before the student body of that world-renowned institution of learning.

On an official trip to the Panama Canal Zone, requested by the Governor, Mr. Oxholm demonstrated this film before Canal engineers at a special meeting called for the purpose.

The film was placed at the disposal of the National Committee on Wood Utilization by the Long-Bell

Lumber Company, showing the operation of their logging camps and sawmills in Longview, Washington.

Head Masters Discuss Visual Education

The last monthly meeting of the head masters of the various high schools of Northern New Hampshire held February 6th at Littleton, was devoted entirely to visual instruction. Mr. Hays, manager of the Bausch and Lomb Optical Company at Boston, demonstrated various types of their still projectors, and Mr. C. Urban Shorey, of Lancaster, New Hampshire, followed with a demonstration of Bell and Howell equipment.

College Plans Course in Study of Motion Picture

The College of the City of New York has instituted a course on "The Art of the Motion Picture," to be conducted by Irving A. Jacoby, intended for "the intelligent movie-goer, the student of comparative art, and members of the motion picture industry who seek the proper perspective of films."

Sixteen lectures will be given in the course, each lecture to concentrate on a different phase of the motion picture. The course is to be supplemented by showings of important pictures no longer exhibited. The history, present trend and probable future of the motion picture will be considered.

Central Information Bureau for Educational Films

The Central Information Bureau for Educational Films has been formed in England to render service to the teaching profession and to social and industrial organizations in Great Britain, the Dominions, India and the Colonies who are interested in cinematography from their respective standpoints.

Mr. J. Russell Orr of the Bureau was for seventeen years Director of Education in the Colonial Service for the British, Dutch, Indian, Arab and African peoples in the Colony and Protectorate of Kenya. Since he returned to England in 1928, he has devoted his energies to the study of visual education and in 1930 accepted appointment as Secretary of the Commission on Educational and Cultural Films where he was brought into contact with all aspects of the educational film both at home and abroad. His experience, therefore, of the education of different races and of the progress of educational cinematography is considerable.

He is also fortunate in the collaboration of Mr. H. W. Samson whose travels in the Far East have brought home to him the immense service which cinematography can render to the less civilized communities of the Empire by the teaching of agriculture, afforestation and irrigation; child welfare, hygiene and sanitation; and the maintenance of law and order.

The aim of the Bureau include the following:—

(*a*) The encouragement of the use of cinematography as an incentive to individual initiative: as an invaluable aid to scientific and industrial research; and as an attractive medium of education for all races within the British Commonwealth of Nations.

(*b*) The maintenance of a register of non-theatrical projectors and of films illustrative of education, science, industry and social welfare.

(*c*) The provision of a reference library of English and foreign books dealing with cinematography.

(*d*) The organization of lectures in Great Britain on cinematography in all its aspects.

(*e*) The distribution to subscribers of the monthly journal "The International Review of Educational Cinematography."

(*f*) The building up for circulation among subscribers of a library of approved 16mm. films.

(*g*) The organization of a centre to which teachers may submit for the guidance of film producers scenarios of films which are in conformity with the school syllabus.

(*h*) Exchange of information with foreign film institutes and periodical exhibitions of the best foreign films of non-theatrical interest.

(*i*) Co-operation with amateur cinematograph societies.

(*j*) And, above all, supporting the findings of the Commission on Educational and Cultural Films as set out in the concluding chapter of their Report "The Film in National Life."

Talking Films Urged as College Economy

"Kinetographic pedagogs" to relieve what ails both education and the unemployed during depression were proposed by Dr. Ernest Seeman of Duke University, Durham, N. C., in a report to the educational committee of the Southeastern council, an association of educators.

"Kinetographic pedagogs" are talkies designed, under Dr. Seeman's ideas, to reduce teaching costs to fit falling taxes, and at the same time to give virtually free to unemployed an opportunity to satisfy "a boundless thirst" for technical and cultural knowledge. The films would be made by the master minds among educators, scientists, economists and famous leaders of men. They would combine the dynamic "close-up" of the movie with instruction suited both for teaching in schools and for giving the unemployed first hand lessons in technology, trades, commerce, history, hobbies—a practical and useful way of spending enforced leisure time.

AMONG THE MAGAZINES AND BOOKS

CONDUCTED BY MARION F. LANPHIER

Science Education (February) An experiment, conducted by Professor C. C. Clark of New York University, to determine the value of "Sound Motion Pictures as an Aid in Teaching Science," briefly reported in the February issue of THE EDUCATIONAL SCREEN, is more fully described in this publication.

In comparing the advantages of sound motion pictures with those of silent motion pictures and identical lecture demonstrations, Dr. Clark found that the lecture type sound film was inferior, but sound films in which the sound is a vital part of the picture, are more effective than the silent film.

Another experiment involving visual aids is reported in this issue, on the value of "The Micro-Projector Compared with the Individual Microscope in Teaching High-School Biology," by Allan Strathers of the Weston, West Virginia High School. In addition to the initial saving in equipment, slides and time achieved by the purchase of a micro-projector, the results of the tests favored the use of the micro-projector as an improved teaching device. It provides for a correct detailed observation with group discussion under the direction of the instructor.

New York State Education (January) The fourth article in the Visual Education Series appearing in this periodical is "Pictures in Education," by J. J. Jenkins, Director of Visual Education of the Bronxville, New York, Schools. It is a short and concise discussion devoted primarily to the use of photographs, photographic reproductions, prints, and posters, suggesting methods for filing, mounting, and use.

Regardless of the size of the picture, the teacher is advised that the intensive study of a few pictures will bring far more effective results than looking at a large number.

Journal of the National Education Association (January) Miss Zoe A. Thralls of the University of Pittsburgh, contributes further helpful material for geography teachers with her article on "Globes, Graphs, and Museum Materials," all of which have their distinctive and specific functions. In teaching children to interpret and use globes, graphs and statistics, the same fundamental principles apply as in picture and map instruction.

The writer feels that museum materials have not been properly used in geographic instruction. Their value depends upon their selection and appropriate guidance in their use. She cites the exhibits of the Buffalo Museum of Science as illustrations of effective exhibits.

The Atlantic Monthly (January) "Will Hays and What the Pictures Do to Us," by Norman Hapgood, reviews his Subject's background against which, eventually, the world saw Mr. Hays as potential Czar of Moviedom. Opinions vary anent that gentleman's activities as much as they always must in judging the program and theory of any individual placed in so acutely responsible a position. It is not the place here to express either agreement or disagreement with Mr. Hapgood's appraisal of his subject. Suffice it to say that the article is comprehensive, steady in its tone, and certainly fair.

> Hundreds of thousands have some image in their minds of the Will Hays of slight frame, quick step, blue eyes, and ears outstanding. How many undertake to conceive clearly the soul behind the blue eyes, the active temper, and the friendly contact? To comprehend Hays, and what he means in the element of American life in which he is the leader, is not only to understand his influence justly, but also to understand the strata in our country that Hays instinctively represents.

Mr. Hapgood then reviews in detail, from his birth in Indiana to the acceptance of the difficult movie job, those influences of home, church, school, lodge and, finally, the professional and political activity, that molded Will Hays.

> Those, however, who were to pay his salary suffered not at all from reflections on the moral effect of their productions. The benefits they hoped from the services of the cabinet officer were several and definite:—
>
> 1. Movements toward censorship were vigorous in a number of states. It was thought that Hays, as well as anybody in the country, would be able to present the passage of such legislation. He has done it.
>
> 2. Behind the political impulse toward censorship lay certain bodies of opinion, notably the churches. In understanding such moral opposition, and dealing with it, Hays was judged by the picture magnates to be second to none. In my opinion, the best tribute that can justly be paid him is to say that in forming groups inside his organization to keep in touch with every kind of expressed opinion, he has done all that circumstances have permitted.
>
> 3. The United States Post Office, the largest distributing agency in the world, was being handled with ease by its head. The picture business, in its three branches of production, distribution, and exhibition, was in utter confusion, and needed an executive with prestige and talent to give it unity. Nobody doubts that he has accomplished this work with skill.
>
> Too much has been expected of him by the 3 per cent

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DEPARTMENT OF VISUAL INSTRUCTION NOTES

CONDUCTED BY ELLSWORTH C. DENT, SECRETARY

Plans for Summer Meeting

The annual meeting of the Department of Visual Instruction will be held in Chicago on July 5 and 6, 1933. Dr. C. F. Hoban, President of the Department, has outlined a series of luncheon and afternoon meetings, leaving the mornings open for the general sessions of the N. E. A.

A committee has been appointed to complete details of a meeting place, local entertainment program, and the like. This is known as the Committee on Arrangements, and is composed of the following: Dr. Frank N. Freeman, University of Chicago; Paul G. Edwards, Director of Visual Instruction, Chicago City Schools; and Ellsworth C. Dent, Secretary of the Department. Tentative arrangements have been made and this committee plans an early meeting to complete all details.

As soon as a definite meeting place has been reserved, there will be suitable announcements in this section, as well as direct mail notices to all members of the Department. Printed programs will be available for general distribution.

The central theme for the summer meeting will be, "Relating Visual-Sensory Aids to the Curriculum." Prominent visual instruction workers and other educators are being invited to participate. Among those who have accepted places on the program to date are Superintendent R. G. Jones, Cleveland City Schools, Cleveland, Ohio, and Miss Elda Merton, Waukesha City Schools, Waukesha, Wisconsin.

It is expected that the 1933 meeting of the Department will be one of the most interesting and the largest in the history of the organization. Plans are being made to accommodate five hundred at each of the sessions, and additional space can be secured as needed. Those who plan to attend the luncheon meetings will do well to make reservations as far in advance as possible. It will be advisable, also, to make room reservations far in advance. The general demand for rooms among those who come to Chicago for the World's Fair, as well as the demands of those attending the National Education Association sessions may cause inconvenience to those who wait to make reservations after arrival.

The Committee on Arrangements will expect to give each member of the Department an early opportunity to reserve rooms at the headquarters hotel, as well as tickets for the luncheon meetings. Prompt attention to correspondence concerning these matters will make the meeting more pleasant and profitable to all who may be concerned.

In addition to taking care of all personal reservations promptly, each member should assist those who are not members, but who may desire to attend the meetings of the Department of Visual Instruction. It is hoped that those who attend may desire membership as well, but the meetings will be open to all—with the exception of executive sessions—regardless of membership affiliations.

Encouraging News from Massachusetts

The following are quotations from a letter to the Secretary of the Department, written by Mr. Abraham Krasker, President of the Massachusetts Branch of the Department of Visual Instruction. It is hoped they may indicate, to a considerable degree, what could be done in other sections under similar direction.

"We had a very fine program at our annual meeting last Saturday. (See progam in February issue of this magazine.) The same program not only served our annual meeting but was also repeated at the Massachusetts Schoolmaster's Club.

"We had a very stormy day—the greatest snowfall we have had for the past five years. In spite of this, we had an attendance of about 125 people. The hospitality extended to us by the Brookline Public School was very gratifying. The building was beautifully decorated for the purpose. The classrooms had many fine displays showing the use of visual education as an aid to instruction. There was an unusually large group of exhibitors. Many expressed the feeling that it was very successful, although the attendance was not as great as had been expected.

"One of the signs of the growth of the movement may be the increase in the number of courses in this field being offered by educational institutions. Enclosed is a complete list (see below) of the courses offered by various institutions, and the instructors in charge. This is a distinct growth in the past year and is a good sign of the rapid growth to be expected in the very near future.

"The new course about which I wrote you, *Leading Movements in Education*, operated by means of sound motion pictures, had its introduction last Thursday. It was a thrilling, new experience. We offered this as a Harvard-Boston University extension course to the teachers of Quincy. Of the five hundred teachers employed in Quincy, over

one hundred attended the first meeting of this course. About eighty enrolled for it. There was unanimous agreement that the course was unusually worth while. Those attending were thrilled with the experience and expressed their feeling of the unusual possibilities such a method provides.

Teacher-Training Courses Increase

It is interesting to note the rather rapid increase in the number of teacher-training courses being offered in the field of visual instruction. The lead taken by Pennsylvania in requiring such courses for certification has served to bring the matter to the attention of educators in other sections of the United States, particularly those who are charged with the training of teachers for service among the public schools.

Teachers in Massachusetts are now being offered eight residence and three extension courses in visual instruction, one of which is designed primarily for religious workers. The institutions, courses and instructors are listed below:

Institution	*Course*	*Instructor*
Boston College	Visual Education	Mr. John Hennessey, Director of Visual Education, Boston Public Schools.
Boston Teachers College	Visual Education	Mr. John Hennessey
Boston University, School of Education	The Use of Teaching Aids	Mr. Abraham Krasker, Director of Visual Education, Quincy Public Schools.
	The Management of a Teaching Aids Department	Mr. Abraham Krasker
	Visual Aids for Teachers of Science	Dr. George Roemmert, Biological Museum, Munich, Germany.
	Teaching Aids in Nature Study	Dr. Earle Brooks, Professor of Education, Boston University School of Education.
Boston University, School of Religious Education and Social Service	Motion Pictures in the Church	Dr. Howard M. LeSourd, School of Religious Education and Social Service, Boston University
Harvard University, School of Education	Sense Aids in Education	Dr. Phillip J. Rulon, School of Education, Harvard.
Harvard-Boston University Extension	The Use of Teaching Aids	Mr. Abraham Krasker
Mass. Dept. of Education, University Extension	Visual Education	Mr. John Hennessey
	The Making of Visual Aids	Mr. Burdette Buckingham, Instructor of Physics, Senior High School, Quincy.

An Instructor in Visual Education, member of the Department of Visual Instruction, will be available at the end of the present school year. He is qualified to conduct teacher-training courses in Visual Instruction, teach methods of research and supervision of student publications. An instructor of photography during the war, he is familiar with all forms of photography including motion pictures. He may be communicated with through THE EDUCATIONAL SCREEN, 64 East Lake Street, Chicago, Illinois.

It is quite probable that a good part of this emphasis upon the training of visual instruction workers in Massachusetts is due, in part, to the efforts of the very active Massachusetts Branch of the Department of Visual Instruction, of which Mr. Abraham Krasker is President.

Several schools in the Rocky Mountain area are planning visual instruction courses for the summer sessions of 1933. Those which have such plans, tentative or completed, include the University of Colorado; Colorado Agricultural College; Brigham Young University; New Mexico Normal University; and the Arizona State Teachers College at Flagstaff.

Membership Application Blank

Office of the Secretary,
Department of Visual Instruction,
1812 Illinois Street,
Lawrence, Kansas.

Date.....

I herewith make application for ☐ Active ☐ Associate ☐ Institutional ☐ Contributing Membership in the Department of Visual Instruction of the National Eduaction Association, combined with the National Academy of Visual Instruction, covering the period of one year from date.

Check below the preferred date for payment of dues.
☐ Remittance attached ☐ First of next month.
☐ .....

Name .....

Position .....

Residence .....

City and State.....

I am ☐ / a member of the
I am not ☐ \ National Education Association

Note: Make checks payable to the Department of Visual Instruction.

FILM PRODUCTION ACTIVITIES

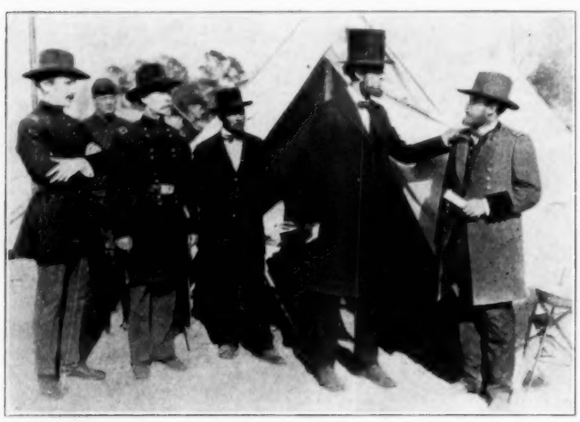
The aim of this new department is to keep the educational field intimately acquainted with the increasing number of film productions especially suitable for use in the school and church field.

Eastman Releases Lincoln Picture

A motion picture life of Lincoln for classroom projection is currently announced by Eastman Teaching Films, Incorporated. In two reels the motion picture conveys a remarkably lucid story of Abraham Lincoln's career, against an authentic historical background.

The motion picture, bearing simply the title *Abraham Lincoln*, is characterized by brief sequences revealing significant episodes in the Lincoln history. The brevity of the episodes rather than detracting seems to add clarity to the screen biography by moving the story of Lincoln's life rapidly forward.

Boyhood, young manhood, early political experiences, the debate with Douglas, and election to the Presidency occupy the first reel, Civil War problems, flashes of the war itself, the end of the war (symbolized rather dramatically by a close-up of the clasped hands of Lee and Grant after the surrender), the rejoicing that the nation was preserved, and Lincoln's assassination—these scenes fill the second reel.



The President Visits General Grant

Throughout the motion picture, scenes reflect the kindly, sagacious Lincoln whom his country men revere. George Billings, whose appearance is remarkably close to Lincoln's, plays the part. Grant and Lee are other characters represented with close fidelity to the originals. The film has been made historically authentic in every detail by exhaustive investigation on the part of the Eastman Teaching Films staff.

Although *Abraham Lincoln* was prepared for classroom purposes, with the teacher leading discussion before or after the projection, the film, like last year's motion picture life of George Washington, is expected to appeal also to patriotic societies and similar organizations.

Culver Academy Filmed

Three 35mm sound-on-film pictures dealing with the activities of the boys at Culver Military Academy have just been finished by Chicago Film Laboratory.

Culver Woodcraft emphasizes educational recreation showing the camps and established routine during the eight weeks Summer School which Culver offers to the older boys in its Naval and Cavalry Schools and to the younger boys in its Woodcraft School. The picture portrays the work of the Handicraft Class, including Basket Weaving, Cane Weaving, Making of Moccasins, Building of Model Air Planes and other studies. The athletic side of the Woodcraft School showing boxing, baseball, swimming and various games, is also brought out. The unusual care which the boys are given is definitely brought out including the watchfulness which predominates at Culver.

Naval and Cavalry School Picture deals with "Organized Vacation" which was pioneered at Culver in 1902, showing the very complete facilities at Culver for this type of activity. The picture portrays the training which the boys receive in taking Sounding, Reading the Sextant, Sailing by Chart and Compass—controlling mechanical crafts in the water, and particularly the enjoyment which goes along with this teaching. Sports in the water are also shown as sports play a large part in the lives of the boys at Culver.

The Cavalry side of the picture shows the mounts of the famous Black Horse Troup and includes the many interesting activities which the boys go through in their eight weeks course in the saddle.

Youth in Action opens with scenes of Founder's Rock at Culver as this Rock was the favorite seat of Henry Harrison Culver who founded the Academy in 1894. The estate is over 1000 acres with 21 impressive buildings rising above the leafy oaks. The film brings out the fact that in June 1932 the Culver family gave to education this $6,000,000 plant which is now a trust foundation. The picture proceeds to show the life of the cadets from the Boom of the Morning Gun to the end of the day, including shots of classrooms and various sports. Then follows the life of a cadet in the infantry,

showing him marching to parade and learning precision, teamwork and cooperation. The picture ends with the graduation exercises.

All of these films are accompanied by a narrative voice and musical background, and are extremely interesting for practically every type of audience. Information regarding the securing of these films can be had by writing direct to Major J. W. Henderson, Director of Enrollment, Culver Military Academy, Culver, Indiana.

Pictures for Special Days Planned

The RKO Studio is preparing a series of productions appropriate for showing in connection with holidays and birthdays of important people, such as Paul Revere, Thomas Edison, Abraham Lincoln, George Washington, and Alexander Bell. Saint Valentine's Day, Saint Patrick's Day and Flag Day will also be pictorially illustrated.

This announcement should be welcome news to the non-theatrical field, which is constantly seeking material on such subjects.

New Dairy Lecture Film

When the Cows Come Home, a new 35 mm. sound-on-film motion picture just released by the U. S. Department of Agriculture, shows, according to studies and records made and compiled by the Bureau of Dairy Industry, that cows that freshen in the fall and winter win out on an average in production of butterfat over all others; that registered cows excel the grades in production and income. It is brought out that feed records favor clover, alfalfa, grain, and good pasture. Types of high-producing cows, and of low-producing cows pass in review.

The lecture is by Dr. J. C. McDowell, chief of the dairy herd-improvement investigations of the Bureau of Dairy Industry.

Adventure Series Completed

The Vitaphone Studio announces the completion of the second series of thirteen *World Adventures* short subjects, photographed and edited by E. M. Newman, the famous lecturer and traveller. This series, each subject of which contains the strange customs and habits from all over the world, includes the following: *Dancing around the World, Transportation of the World, An Oriental Cocktail, Curious Customs, From Bethlehem to Jerusalem, High Spots of the Far East, Main Streets, Beauty Spots of the World, Workers of the World, Wonder Spots of the World, Costumes of the World, Peculiar Ceremonies,* and *Tall Spots of the World.*

Mr. Newman, who has spend more than forty years traveling over two million miles through every country in the world in search of material, still continues his "travel habit" of spending six months every year in foreign climes and the other half in assembling his material into film form for the lecture platform. His latest films, taken between Mexico and Colombia, include scenes from Guatemala, British Honduras, Salvadore, Nicaragua, Costa Rica and Panama.

Vitaphone subjects are available through the exchanges of Warner Brothers.

New Industrial Productions

Among recent industrial releases available free of charge are the following:

East Meets West, a 1-reel 16mm sound subject produced by J. Alexander Leggett for the No Mend Hosiery Mills of Philadelphia, showing the manufacture of silk hosiery.

Westclox Wake the World, a 3-reel subject available in 16mm and 35mm from the Western Clock Company of LaSalle, Illinois, produced by Atlas Educational Film Company. The film tells the complete story of the manufacture of clocks.

Brakes, a 6-reel sound film in 16mm and 35mm produced and distributed by DeFrenes & Company, Wilkesbarre, Pa., showing various types of brakes and their care.

Pocahontas, a 3-reel film available in 16mm and 35mm sound on the mining of coal, produced by Visugraphic Pictures for the Pocahantas Fuel Company of New York City, from whom it may be secured.

Two Releases from Educational

Educational announces the acquisition of a two-reel spectacle showing an awe-inspiring under-sea volcano, in action. The picture will be released under the title *Krakatau.* The island of Krakatau, between the islands of Java and Sumatra, is one of the world's worst hot-beds of volcanic eruptions and earthquakes. Both above the ground and under the sea are many ever-threatening craters. When the great under-water crater near Krakatau recently broke loose, J. H. Bekker and his associate scientists were ready with their cameras. While the natives and the wild animals in the volcanic vicinity fled in terror, these men turned their lenses on this marvelous sight from every point of vantage, taking their lives in their hands by flying perilously near the crater.

The Iceless Arctic is a film record of a trip to Alaska, showing the land-locked harbor of Sitka, and the famous city of Skagway, which had a population of 30,000 during the gold rush of '98 and now has a scant 300. Just below the Arctic Circle a farmer is seen busy with his spring ploughing. The journey is concluded with a visit to the salmon traps near Ketchikan.

THE CHURCH FIELD

CONDUCTED BY R. F. H. JOHNSON

A Survey of Motion Picture Uses in the Church Field

A FAIRLY comprehensive resumé of the uses of 16 mm. motion pictures in church work has recently been issued by the Bell & Howell Company. We have been setting forth these various uses from time to time in this department, but it occurred to us that our readers would be glad to see various applications assembled in one grouping.

Naturally the uses given are not exhaustive and there are undoubtedly many others which are quite important, but those set forth are distinctly worthy of consideration. They are as follows:

1. Sermon illustration, both by Biblical and secular film material.
2. Entertainment, for the raising of funds and the enlivening of meetings of church auxiliaries.
3. Promotional films showing work of congregation on building or publishing activities, relief work, maintenance of charitable institutions, etc., thereby increasing financial support for such work, and enlisting new workers.
4. Preservation of historical record of congregation and its activities.
5. Education—for classes in Sunday Schools, or parochial schools, where the latter are maintained.
6. Mission work is illustrated in an incomparable manner.

The usefulness of the motion picture is no longer questioned. The modern 16 mm. projector is entirely safe from all fire hazard, simple enough for a child to operate, powerful enough to give pictures of theatrical brilliance even in larger auditoriums. An abundant supply of suitable film is obtainable, provided general educational material is used to supplement the strictly religious material. Of the latter, too, there is more than is commonly supposed. A fairly complete list is obtainable from THE EDUCATIONAL SCREEN.

Many churches buy their projector as they would any other piece of essential equipment. Others, especially in localities hard hit by economic distress, have worked out interesting and effective special methods of raising funds for the purchase of 16 mm. projection equipment—both for silent and for "talkie" films. The amount involved is not beyond the resources even of the small church. Silent projectors cost from $135.00 to $298.00, with "talkie" outfits approximately doubling this cost. I should be pleased to help any clergyman by supplying information with regard to financing plans.

Church Movies in the Depression

What about movies in the church field during the depression? We hear of several clergymen presenting motion picture programs and giving the proceeds to charity. One of our clerical friends has been putting on such programs for the last month several nights a week. Sometimes the offerings have not been staggering in amount, but there has always been something to pass on to those who are in misfortune.

We hear also of churches putting on free movie programs to keep up the morale of their members and friends. This does not mean that these churches are offering unfair competition to the neighborhood movie houses, because the type of program is entirely different, but it does mean that they are doing what they can to offer a clean type of amusement and recreation to people who are depressed.

As we have mentioned several times in this department, there is now available a fairly satisfactory volume of free commercial films which are suitable for showing in church auditoriums. There is available especially a number of travel films which can be secured from various travel organizations and steamship offices.

We should be pleased indeed to hear from our clergymen friends with regard to whether or not they are doing work of the above character. It seems to us that here is a very good chance to use the motion picture projector to help in building up morale, which after all is one of the most important things in this current depression.

THE FILM ESTIMATES

Being the Combined Judgments of a National Committee on Current Theatrical Films

(The Film Estimates, in whole or in part, may be reprinted only by special arrangement with The Educational Screen)

Broadway Bad (Joan Blondell, Ricardo Cortez) (Fox) Virtuous chorus-girl mother, with bad reputation, wins stardom from scandalous divorce. Converts her gift-jewelry into cash for trust fund and accepts stigma in court to save her child's future. Joan Blondell good in rather mediocre story.
A—Possibly Y—Unsuitable C—Not for them

Cavalcade (Diane Wynyard, Clive Brook) (Fox) Great motion picture material greatly presented. Poignant history of great events in last 33 years and their effect on true English people. Merely tensely human episodes, with little dramatic connection, vividly portray social heroism and the outrageous tragedy of war.
A—Notable Y—Excellent C—Good but heavy

Child of Manhattan (Nancy Carroll, John Boles) (Columbia) Taxi-dancer heroine is mistress of socially prominent millionaire, who offers marriage when child is born. Baby dies and heroine nobly runs away to arrange for divorce, but hero finds her in time for happy ending. Largely false and improbable.
A—Hardly Y—By no means C—No

Deception (Leo Carrillo) (Columbia) Attempt to cash in on the crookedness of the "wrestling game." Easy appeal for followers of the prize-ring, with ringside English, cheap romance of cheap people, and very violent and convincing wrestling bouts.
A—Hardly Y—Better not C—No

Employees' Entrance (Warren William, Loretta Young) (First Nat'l) Hard, unscrupulous head of Department Store well played by William. He preaches "take 'em and leave 'em." Heroine gets job by visiting his apartment—goes again after she has married a decent chap. Sex kept thoroughly in foreground.
A—Possibly Y—Pernicious C—No

42nd Street (Warner Baxter, Bebe Daniels) (Warner) Good musical comedy drama, with striking ensembles and notable trick photography, well acted, directed and cast. Back stage life made interesting and glamorous. Much wisecracking, drunkenness, and very gay romance. Some sincerity and much sophistication.
A—Depends on taste Y—Better not
C—Not for them

Hallelujah, I'm a Bum (Al Jolson) (U. A.) Rollicking, human picture with Jolson engaging as the non-working, much-singing Central Park hobo, intimate friend of big politician. Both being unknowingly in love with same girl brings complications, and pathos. Rhymed dialog painful at times.
A—Rather good Y—**Amusing** C—**Amusing**

Handle With Care (James Dunn, Boots Mallory) (Fox) Inadequately written and directed, slow tempo, thin plot, and El Brendel's comedy work feeble. But uttery clean, wholesome picture, with much human interest, swarms of children, engaging hero and heroine, and notable work by child actor, Buster Phelps. Fine "family" stuff.
A—Fairly amusing Y—**Amusing** C—**Very good**

Hard to Handle (James Cagney, Mary Brian) (Warner) Fast, peppy story of high-powered, unscrupulous but engaging young promoter — fake advertising, quick profits — good warning against fake publicity, but bad example of advertising ethics. Free of sex save a vulgar one-night affair lugged in.
A—Lively Y—Doubtful C—No

King of the Jungle (Buster Crabbe, Frances Dee) (Para.) The "Lion Man," physical Apollo and mental child, reared by lions in their native wilds, is captured with them for circus. Charming Frances Dee redeems him. Highly incredible but largely wholesome and healthily exciting. Much animal interest.
A—Rather good Y—**Entertaining**
C—Mostly very good

Estimates are given for 3 groups
A—Intelligent Adult
Y—Youth (15-20 years)
C—Child (under 15 years)
Bold faced type means "recommended"

Ladies They Talk About (Barbara Stanwyck) (Warner) The beautiful, hard, notorious heroine, pal and moving spirit among bank bandits, adored by young reformer, does term in jail. Prison life and inmates shown picturesquely and amusingly. She planned vengeance upon release, but married her adorer instead.
A—Perhaps Y—Better not C—No

Lucky Devils (Bill Boyd, Dorothy Wilson) (RKO) Picturizes Hollywood activities of the stunt-men who risk their necks for $50 a week. Obvious exploitation, with thrills and romance carefully worked in. Some human-interest attained. But acting is mediocre and dialog crude.
A—Hardly Y—Fair C—Very exciting

Luxury Liner (George Brent, Zita Johann) (Para.) Showy but feeble story, laid on board great ship during Atlantic crossing, supposed to give cross-section of life from first to third cabins. Interesting for background and travel atmosphere, but the "life" consists mainly of conglomerate of sex affairs.
A—Mediocre Y—Unwholesome C—No

Parachute Jumper (Douglas Fairbanks, Jr.) (Warner) Merely sensational picture about two care-free super-brave aviators who leave the Marines, hunt jobs, and meet the down-and-out heroine. Thoroughly spiced with cheap sex stuff and rum-running by air, before hero finally settles down.
A—Mediocre Y—Certainly not C—No

Rasputin and the Empress (The Barrymores, Diana Wynyard, Ralph Morgan) (MGM) Excellent historical picture, true in major features, about Russian royalty, the Great War, and the sinister Rasputin's great role therein. Splendidly acted, thrillingly entertaining, with some very violent scenes. Only defect, Rasputin is made over-melodramatic, wholly repugnant and unhuman.
A—**Notable** Y—Very strong C—Too strong

Robbers' Roost (George O'Brien) (Fox) Another Western of usual ingredients, such as cattle-rustling, frontier romance, violent heroics and beautiful scenery. Morally unobjectionable and adequately thrilling to satisfy those who hunger for this sort of thing.
A—Hardly Y—Good C—Exciting

Secret of Madame Blanche, The (Irene Dunne) (MGM) Fairly convincing story, well acted, with Irene Dunne as young chorus-girl and finally old hostess in a dive, having remained decent throughout. Long-lost son—finally reunited. Many charming scenes but several questionable. Lionel Atwill does fine role.
A—Fair Y—Unsuitable C—No

So This Is Africa (Wheeler and Woolsey) (Columbia) Perhaps crudest and craziest hash to date by these "stars." Burlesque African exploration with burlesque sex stuff which is cheap, vulgar and ridiculous. Humor stale, dialog stupid, plot idotic, taste ribald. Not even good "box office."
A—Trash Y—Trash C—No

Speed Demon (William Collier Jr.) (Columbia) Speed-boat-racing melodrama, lively thriller, full of hokum, in which hero loses race and girl through drinking, adopts a waif, loses him to gangsters—but finally makes sensational come-back to win waif, race and wife.
A—Hardly Y—Hardly C—No

State Fair (Will Rogers, Janet Gaynor) (Fox) Homely, human, appealing picture of country life. Mostly wholesome entertainment, as devoted family of four set out for joyous week at the Fair, with prize hog and mince pies. But for "punch," son and daughter crassly deceive loving parents to achieve clandestine love-affairs, one very dubious.
A—**Good of kind** Y—Mostly fine
C—Mostly good

Topaze (John Barrymore, Myrna Loy) (RKO) Masterful work by Barrymore as French chemistry professor, sincere, honorable, credulous. Tricked into lending his name to spurious product, he learns truth, leaves school and cynically turns tables on the dishonest politicians. Continental mistress in cast, but no objectionable actions.
A—**Excellent** Y—If mature, good
C—Beyond them

20,000 Years in Sing Sing (Spencer Tracy) (First Nat'l) Realistic, prison life based on Warden Lawes' famous book. Tracy is big shot prisoner who expects favors but gets none. He learns better and finally gives his life for another. Lots of toughness and crude romance.
A—Perhaps Y—Perhaps C—No

Vampire Bat, The (Lionel Atwill, Fay Wray) (Majestic) Fantastic tale of mysterious murders, supposedly by vampire bats, until half-mad doctor-scientist is revealed as murderer, seeking human blood for his experiments. Usual scare effects agreeably absent, but ghoulish murderer becomes known too early and interest wanes.
A—Hardly Y—Perhaps C—No

Private Jones (Lee Tracy) (Universal) Comic war picture, rather second rate on the whole but much of it amusing. Tracy good as brazen, irrepressible private, drafted against his will. Old mother dying and sister in power of lecherous old boss, make him willing to go, but he is a rebel to the end.
A—Hardly Y—Perhaps C—Hardly

What! No Beer (Buster Keaton, Schnozzle Durante) (MGM) Crude, ribald, stupid hash of stale gags and familiar slapstick which tries to play up the near-at-hand return of legal beer. Probably poorest Keaton picture to date. Benighted attempt at amusement.
A—Stupid Y—Poor C—No

Whistling in the Dark (Ernest Truex, Una Merkel) (MGM) Good, well-acted light comedy from the stage play with Truex as star. Mystery-story writer and his fiancee fall accidentally into power of gangsters. Forced to devise a murder as price of freedom, he still saves the victim. Cheapened by supposedly necessary bed-room scene.
A—**Amusing** Y—Doubtful C—Hardly

Wild Women of Borneo (Travelogue) (Television Co.) Some interesting shots of animals and of primitive human life and customs in Borneo wilds. Made in 1931, now re-edited, patched, with naive vocal accompaniment added. Much obvious faking, and the publicity attempts sensational appeal which is cheap and false.
A—Mediocre Y—Perhaps C—Hardly

Woman Accused, The (Nancy Carroll, Cary Grant) (Para.) Another society "drama" wherein heroine with scarlet past murders for good cause her racketeer ex-sweetie—then goes on "boat trip" with sweet young lawyer, who saved her from chair, as pre-wedding honeymoon. Usual "moral" ending as would be expected.
A—Depends on taste Y—Unwholesome C—No

Among the Magazines

(*Concluded from page 79*)

(to use his own estimate) who go to the theatre for originality, ideas, and literature. He does what he can for them. But he knows that he is dealing with 97 per cent; that nine out of ten enter the theatre for what is commonly called amusement; and that what amuses them is naive, romantic, and forced. Hays never dreamed he could make the pictures satisfactory to people whose pleasure is gained in the higher thinking. He did have, and still has, the wish to have the pictures do no harm to the moral sense.

"When Hays took the presidency, the Motion Picture Producers and Distributors of America, Inc. included eight producers and one distributor, and it produced 60% of American films. By 1930 of twenty-five members, twenty-one were producing companies, three were manufacturers of equipment, one was engaged in distribution, and it was a subsidiary of a producer; and, of the twenty-one producers, three were also distributors and one was a manufacturer of equipment." Mr. Hapgood then indicates the kindliness and gaiety with which Mr. Hays goes about his difficult work. "In arbitration he has been brilliantly successful . . . . As Hays has undoubtedly strengthened the combination it is fair to ask . . . . if he has hurt the . . . . progress of the cinema."

Mr. Hapgood then speaks of the Brookhart Bill, which will eliminate the blocking system if passed, but which is doomed not to pass (very likely) because two arguments will be offered to defeat it. The first will concern the inadvisability of risking large sums of production expense with no secured market, and the second will suggest that there is no sign whatever that the local manager would reflect a taste higher than that exhibited by the producers. The second of these two considerations is the one that will concern the family with children. It will, in general, harmonize with the facts, but in some localities it will not.

Mr. Hapgood next discusses at length Mr. Hays' "Department of Public Relations" which includes all those cooperative activities with clubs, churches, community organizations and Parent Teachers Associations to present better films in their respective communities.

Space does not permit of further quotation from this very important and significant article. Mr. Hapgood closes his fair and comprehensive discussion with wise and objective commentary upon those matters so long before the attention of serious students of the film as it affects its observers, particularly children. He mentions the many attempts to furnish childrens' matinee programs, the overemphasis of sex and crime as affecting or not affecting young audiences, accordingly as authoritative viewpoints are offered by experts representing both assertions, and, finally, he views the opinions of such men as Mr. Ramsey McDonald, Stanley Baldwin, Mussolini and John Galsworthy, in their feeling about the influence of the film upon foreign relations.

Journal of the Society of Motion Picture Engineers (December) Charles E. Fraser's paper, "Motion Pictures in the Navy," may astonish many in that it presents so vividly the importance of the film in the general program of morale. The author states that, as a peace time equipment, the film furnishes 45% of the recreational activity. "The navy maintains the largest entertainment enterprise in the world—over 300 'theatres,' three large distribution exchanges, and 1000 feature programs constantly in circulation. Much of the equipment is purchased with private funds collected from the Navy personnel." The article is a long and informative discussion of the facts, mechanical and executive, involved.

Dr. McClusky's Report on

VISUAL INSTRUCTION

Its Values and Its Needs

THIS REPORT, made at the request of Mr. Will H. Hays, summarizes the author's ten years of intimate study in the field of Visual Instruction from the research angle. Dr. McClusky's first contact with Visual Instruction was at the University of Chicago where, under the guidance of Dr. Frank Freeman, he wrote his doctor's thesis in that field. Since that time as chairman of a National Educational Association sub-committee and as President of the National Academy of Visual Instruction he has made a number of surveys of the use of visual aids in the educational field, thus giving him a wide background of rich experience for this study which is reported herewith.

Among questions answered in this report are: What is the Present Status of Visual Instruction? How many courses in Visual Instruction are offered in the schools of our country? How many teachers in training are being instructed in the methods of Visual Instruction? What is the annual expenditure of city school systems for Visual Instruction? What are the immediate needs of Visual Instruction? What can industry do to cooperate with educators in furthering the advantages of this new medium of teaching? It is the only authentic and up-to-date study of its kind ever made.

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SCHOOL DEPARTMENT

CONDUCTED BY DR. F. DEAN McCLUSKY

Director, Scarborough School, Scarborough-on-Hudson, N. Y.

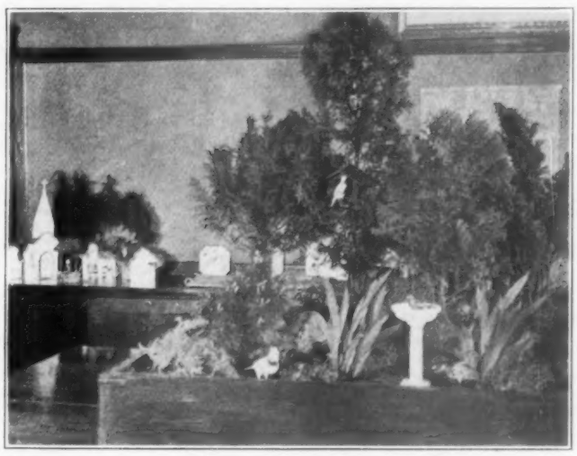
Our Bird Sanctuary---A Project

ETHEL M. HILL

OUR AIM was to demonstrate to the pupils the presence of all art elements and principles in Nature as well as in studio work, and to bring a touch of Nature into the classroom to children who know all too little about it.

This involved much preparation and research work of the most interesting and fascinating type. As an initial start we visited a rock garden which had been set up by well known nurserymen in our largest department store. Here the class made notes of the kinds of plants, the nature of the soils, and the practical utility of the elements of design in the structure of the garden.

Then, as is usual in most of our work, the class was divided into congenial groups, each of which had a special assignment of its own choice. One consulted books at the library on the construction of bird sanctuaries, rock gardens, etc. Another studied some of our commonest birds in relation to their habitat especially. All the pupils at different times studied an excellent collection of mounted specimens at the Museum. Then in our art room we had available at all times during the development of our problem the Audubon bird charts and a few well mounted specimens of birds.



The Completed Project

Another group essayed the study and construction of birdhouses to be used in the completed sanctuary. Bird baths was the problem of one group and several made a special study of the nests of the birds to be placed in our garden.

From a number of plans drawn one had been chosen to be followed and under the supervision of the manual training department some of the boys had constructed a waterproof base. Soil, plants and shrubs were secured from a nurseryman. Then the work began in earnest. Each group applied itself assiduously to its part of the work and everything progressed happily. It was a revelation to the teacher to note the deep and almost reverent interest displayed by those who set up the sanctuary. Each shrub and each plant seemed to speak a message to those who had the pleasure of placing them in their assigned places. After the planting of the first group of plants the teacher decided then and there that each pupil must have the opportunity before the completion of the garden to place one plant — no matter how small. After all one touch of Nature *does* make the whole world kin.

Not one child had ever modeled birds, and again the teacher felt rather than saw the intense feeling with which each pupil handled the clay and studied the beautiful specimens and pictures. The result was a delight to all.

In the estimation of the teacher and of those who were especially interested, it was a worthwhile project for it made a deep impression upon our pupils. It aroused great interest, especially in Nature and the relation of design to Nature. It stimulated independent thinking and individual work. It developed confidence in the children of their native ability and certainly gave them the habit of research work.

One group indicated sufficient interest to start a small sanctuary in the home yard of one boy in the class and several declared their intentions to make birdhouses to place in trees in their own yards.

At a demonstration of Visual Education in our school this class had the responsibility of interpreting the problem to visitors. Their interpretation in their own words follows:

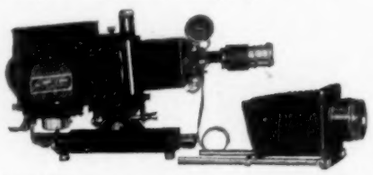
"Our aim was to make our Bird Sanctuary consistent in structure, color and purpose. We placed our plants and shrubs with the idea that it should look natural—not artificially created. And in order that this might be true we knew that design and pattern must be considered so a plan was drawn.

"We tried for order and beauty by following the

SPENCER
Classroom Lanterns
A Real Necessity

In these days of curtailed finances every dollar must do double duty—Dollars invested in the combination glass slide, filmslide and microscope slide lantern —Model DC—will bring more than double returns to both the teacher and the pupils.

The use of these visual aids increases interest, reduces failures and repeaters, and brings to the students a much more comprehensive understanding of the subject they are studying.



In Model DC you are getting a three-purpose lantern at a very low cost. It has a number of special features built in to the lantern for the convenience of the teacher—all are listed in booklet K-78, sent gratis.

SPENCER LENS COMPANY
BUFFALO, N. Y.

Do You Know Your Tools?

Photography is without doubt the most useful tool of the Visual Educator.

Can you use this valuable medium properly, efficiently, artistically?

The CAMERA CRAFT BOOK SERVICE can supply authoritative texts on any photographic subject. The CAMERA CRAFT magazine brings you the latest news and instructive articles.

Write for our free catalog giving a complete list of photographic books and a sample copy of Camera Craft Magazine

Camera Craft Publishing Company
703 Market Street - - San Francisco, California

laws of design and therefore Nature's way of design. This gave us proportions pleasing to the eye.

"Since another aim in the construction of our Sanctuary was to provide a home for our birds we found there had to be a variety of planting areas for which we selected the proper plants — shrubs in the background for shelter, flowering plants for some birds, like the humming-bird, for instance, and greenery and water for all.

"We found it a real art to attempt to occupy space without taking away from space.

"In Nature we know that birds quickly adapt themselves to their surroundings in habit, form and color so we modeled our birds with that in mind and the result in the completed bird we found to be true to all laws of color and design."

"There is a lesson in each flower,
A story in each stream and bower,
In every herb on which you tread
Are written words, which rightly read,
Will lead you from earth's fragrant soil
To hope and holiness and God."

◆ ◆ ◆

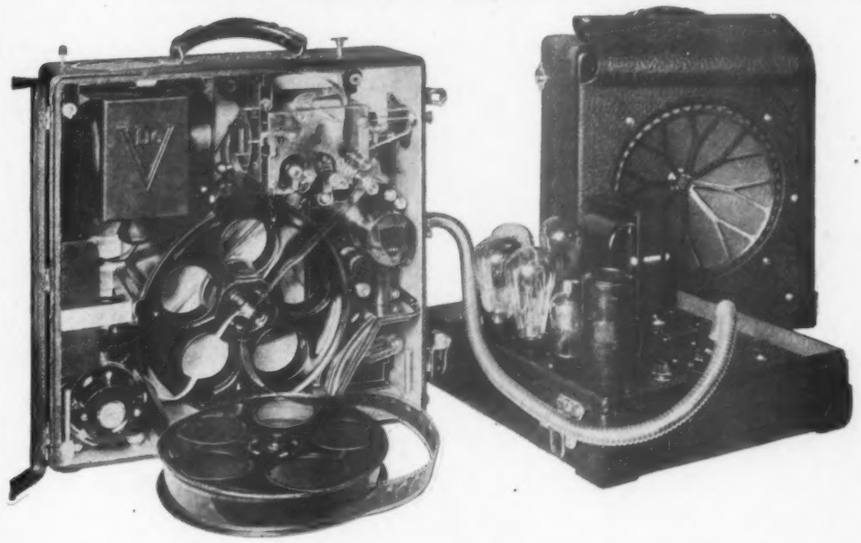
In connection with the work described in the above article, we are glad to offer the following information regarding the Audubon colored bird-pictures and leaflets furnished to school teachers and pupils by the National Association of Audubon Societies.

The plan is very simple. The teacher may explain to the pupils that they are going to form a Junior Audubon Club and have a few lessons, from time to time, about some of the more common North American birds. The teacher will also explain that each child wishing to be enrolled must bring a fee of ten cents in return for which he will receive a set of six beautifully colored bird-pictures made from original paintings by America's leading bird-artists. Accompanying each of these pictures, there also will be a leaflet with four pages of text, written by well-known authorities on bird-life.

The Morning Dove

Every teacher who is successful in forming a club of twenty-five or more receives free a year's subscription to the magazine *Bird-Lore*, which is the world's leading, popular periodical devoted entirely to Birds.

LACK OF SCHOOL FUNDS
HAS FORCED THE SCHOOLS TO A POLICY OF SELF HELP
"Self Liquidating Equipment" Is the Need of the Hour



The Depression isn't all Bad. It has driven the schools to do now what they **should have done years ago**—use Visual-Sound methods in all departments of the school — and in the Auditorium. By buying 35mm Sound-on-Film equipment, regular theatre talkies can be shown, to **raise money** for paying for the equipment, and to raise money for other purposes as well.

Give Regular Theatre Talkies as soon as it is installed. Afterwards, show Educational films in all departments of the school. The DeVry Sound-on-Film Projector guarantees to furnish as good sound and pictures as any theatre in America.

DeVry also converts your old 35mm projector into professional quality sound-on-film at low cost.

The Chicago School System has been harder hit than any other — but read these letters:

"Our auditorium seats about fifteen hundred, and invariably, the morning performance gives us a full house, while we run about eleven hundred in the afternoon.

"Our admission price is 10 cents and outsiders are excluded. The sale of tickets and advertising is limited to the school and is handled through our school organization 'The All-Calumet Civic League'. We have run a successful show with as little as four days notice. We selected DeVry equipment after trying ———, ———, ———, ———." (Four leading competing machines.)

Yours truly,
(Signed) Amerigo R. Sansone
The Calumet High School (Chicago)

"We usually arrange for a show once a week and run three performances due to the enthusiastic support of our students. As there is an unlimited supply of really good educational motion pictures, our programs are never dull.

"When we first conceived the idea of using talking motion pictures as an educational medium, we frankly were afraid of the obligation, but your statement that a 'DeVry pays for itself' has held true.

"We decided on your equipment after witnessing demonstrations by practically every other portable and semi-portable equipment on the market. We sincerely and heartily recommend it to any similar institution."

Yours truly,
(Signed) Wm. G. Just, Electrical Dept.
Roger Sullivan Jr. High School (Chicago)

Write for similar letters from Crane, Emerson and other schools. Send for free booklet: "Raising Funds with DeVry Talkies." HERMAN A. DeVRY INC. 1111 Center St., CHICAGO

The bird-study material is supplied the children where as many as ten are enrolled.

Junior Audubon Clubs have become very popular in many of the schools in the United States and Canada, and altogether more than four and one-half million members have been enrolled in bird-study under this arrangement. Many teachers make a practice of renewing the work every year, as they have found by experience that far better results are obtained where the work is given continuity. For instance, a child who every year for five years, has brought his fee of ten cents has had the opportunity of studying thirty birds, and if properly instructed has saved all his leaflets and colored pictures which have been bound together in a little book. Last year 161,384 boys and girls were members of Junior Audubon Clubs.

The headquarters of the Audubon Societies is located at 1775 Broadway, New York City.

County Cooperative Educational Film Library

Nine Berks County (Pa.) schools have combined into a "Visual Educational Library Association" for making available 16 mm. educational films. The action was initiated by J. L. Appenzellar, Supervising Principal of Wyomissing School District. Mr. Appenzellar writes: The response to the movement has been very encouraging. At the beginning we had set as a goal six contributing schools. A number of other districts have rented films from us, and I believe that, with the assistance given them by members, they are becoming interested in visual education. Our projector has been used extensively by neighboring schools that are unable at the present to purchase one." (*Filmo Topics Magazine.*)

A Geography Lesson With Visual Aids*

SUE BISHOP

I. **Lesson Statement**

In Asia much of the work is done by animals and people rather than machines.

II. **Aims**

Immediate—To get acquainted with different types of labor in the Orient.

Ultimate—To discover that these types of labor depend largely upon—

1. Surface of country
2. Climate
3. Density of population

III. **Methods Used**

A. Slides—Commercial and made by pupils.
B. Moving Pictures.
C. Geographic Pictures
D. Note Book Work—with oral check up
E. Written Check Up Test

IV. **Introducing the Lesson** (Use black-board)

By questions draw upon pupils information gained through past experience, reading, and observation as follows:

A. List animals commonly used in—

(On board)	(From pupils)
1. Deserts and dry lands	Camels-Yaks
2. Hilly regions and high plateaus	Donkeys-Mules
3. Warm, swampy parts	Elephants-Water Buffaloes
4. Cold regions	Dogs-Ponies-Horses
5. Farms	Oxen-Bullocks-Donkeys

B. Coolie labor would be found mostly

1. In cities..Porters-Ricksha Men-Peddlers
2. On rivers ..... Poling boats-Loading and Unloading
3. On farms ..Plowing-Reaping-Threshing

V. **Presentation of Hand-Made Slides by Pupils**

1. The Ricksha Man
2. The Furniture Mover
3. Beating Out Grain
4. A Sedan Chair
5. A Yak
6. A Chinese Wheelbarrow
7. Carrying Tea
8. A Samoan
9. A Water Buffalo
10. An Ox Cart of India

*Editor's Note — We are indebted to Miss Sue Bishop of the Wollaston School, Quincy, Mass., for this detailed working outline for the teaching of a specific lesson-topic with visual aids.

Save as Much as $122.50 Through Bass Bargains

On these fine quality, standard motion picture equipments. Act today, as the quantity of these items at these exceptionally low prices, is limited.

Rebuilt Bell & Howell 16mm. Projector Model 57, 200 watt bulb, complete **guaranteed,** with case. New cost, $190.00; price **$67.50**

Demonstration Model Stewart Warner 16mm. Projector with **powerful 500 watt bulb,** forward and reverse takeup, high speed rewind, one of the finest values on the market, complete with case. Special at **$90.00**

Brand new DeVry Model G 16mm. Projector, 200 watt bulb, **double claw, motor driven still picture attachment,** complete with high speed rewind, ready to use, with case. Former price, $95.00; now **$37.50**

New 16mm. Peko Projector, Motor driven, **runs forward and reverse,** high speed rewind. Amazing value, **brand new.** Special at **$15.95**

Brand new 100 ft. capacity Peko Automatic 16mm. camera with F:3.5 lens, wear-proof carrying case, takes **Standard Eastman** or other make reversal film. An unusual bargain at **$22.50**

···BASS···
CAMERA COMPANY
179 W. Madison St., Chicago

FREE! The famous Bass Bargaingrams and 16mm. Library Rental Catalog. Hundreds of subjects at low prices.

☐ **Send me 16mm. Apparatus Bargaingram.**
☐ **Send me 35mm. Camera and Projector Bargaingram.**
☐ **Send me Bass 16mm. Film Rental Library Catalog.**

NOW! SOUND PICTURES!

GENERAL ELECTRIC EDUCATIONAL FILMS

Technical and Nontechnical
With Synchronized Sound or Silent

The General Electric Company, through its Visual Instruction Section, has produced many educational pictures of both a technical and nontechnical nature. These films are intended for exhibition in the interest of education, public welfare, and commercial development. They deal with the electrical industry, its accomplishments, and its relation to other industries.

General Electric films — 35- and 16-mm. silent and 35-mm. sound — are lent free of charge except for transportation costs. Write to the nearest of the following General Electric offices for a copy of Motion Picture Catalog, GES-402B.

1 River Road, Schenectady, N. Y.
1405 Locust St., Philadelphia, Pa.
230 S. Clark St., Chicago, Ill.
200 S. Main St., Salt Lake City, Utah
1801 N. Lamar St., Dallas, Texas
84 State St., Boston, Mass.
925 Euclid Ave., Cleveland, Ohio
329 Alder St., Portland, Oregon
187 Spring St., N. W., Atlanta, Ga.

Special Distributor—
*Department of Visual Instruction, University of California, Berkeley, Calif.

*A small service charge is made for films ordered from this office.

GENERAL ELECTRIC

VI. Presentation of Keystone Slides by Pupils

1. Sawing Lumber in Manchuria
2. Road Making in China
3. Bactrian Camels from the Mongolian Deserts
4. Chinese Boys Plowing in Northern China
5. Making Woolen Shawls in India
6. Coolies Hauling Grain
7. Mongolian Ponies

VII. Preview of Moving Picture to Show Contrast Between East and West

1. Irrigating Rice Fields; 2. Loading Boats; 3. Hauling Lumber; 4. Hauling Freight; 5. Carrying Mail.

VIII. Note Book Work

Materials—Map of Asia showing various regions given in the introduction to this lesson—(Pupils did this work in a previous lesson)

ASIA—By Nellie B. Allen

Crayons-Checked Paper-Pencils-Rulers

What to do—

1. Make eight frames 1½x2 in. above, beside, below map.
2. Print titles in order beginning with frames above map.
   a. Donkey; b. Camel; c. Horse; d. Coolie; e. Sampan; f. Elephant; g. Water Buffalo; h. Yak.
3. Use page references after each title—to find the regions—then draw arorws from pictures to regions—use region color for arrow.
4. Draw and color pictures according to titles under frames.

IX. Oral Check of Note Book Work

X. Check Up Test

Fill Blanks

1. Horses are used in the.....regions. (Cooler-Warmer)
2. The swampy regions of Asia are mostly in the ..... (North-East-South-West)
3. Water buffaloes are used on the....farms (Northern-Southern)
4. The freight car of the desert is the..... (Coolie-Camel-Donkey)
5. The densely populated regions in Asia are in the ..... (Northwest-Southeast)

For Screen Projection

Write for free samples.

RADIO-MAT SLIDE CO., Inc.

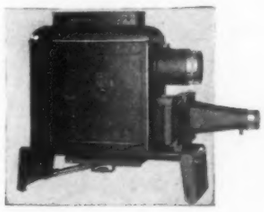
1674 Broadway, New York, N. Y.

The Complete Line of B&L Balopticons Meets Every Still Projection Need

KOSB Balopticon

THE superior quality of Bausch & Lomb optical glass and infinite care in design and manufacture are reasons for the superior performance of every B&L Balopticon. Clear sharp detail right to the edge of the image gives your pictures a brightness that holds attention. Remember "B&L makes its own optical glass. B&L glass meets B&L standards."

B BALOPTICON—projects slides only. It is a handy, efficient instrument for the classroom and is one of the most widely used instruments for still projection. Attachment for strip film available. Model BDT is the same instrument but equipped with a tilting base.



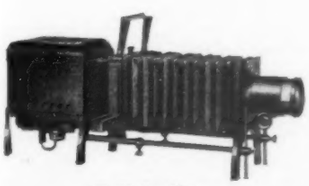
LRM Balopticon

LRM BALOPTICON—projects either slides or opaque objects onto an opaque screen at distances up to 18 or 20 feet. Extremely simple to operate. Projection quality is unexcelled. Easily portable.

KOSB BALOPTICON—newest product of 28 years of experience of making still projection equipment, is of the translucent screen type and projects either slides or opaque objects. The powerful illuminating system projects the subject through the screen which stands between it and the audience. The teacher faces the audience and no assistant is necessary.

The complete B&L line includes the Brief Case Sales Projector, the Overhead Projector, the Triple Purpose Micro-Projector, etc.

Write for complete details.



B Balopticon

BAUSCH & LOMB OPTICAL COMPANY

688 ST. PAUL ST. ROCHESTER, N. Y.

Bausch & Lomb makes its own optical glass.

B & L glass meets B & L Standards.

MICROSCOPES : TELESCOPES : BINOCULARS : SPECTACLE LENSES and FRAMES
OPHTHALMIC APPARATUS : SCIENTIFIC INSTRUMENTS

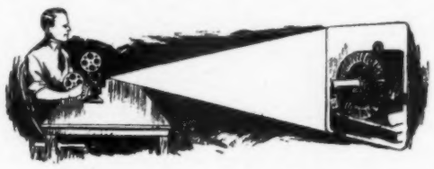
The National School of Visual Education

HERE is another triumph for Visual Education. The importance of Home Study, in the educational system of this country, is well proven by the establishment of "Extension Divisions" by many of the leading colleges and universities. Large numbers of men and women of all ages, unable to attend regular day or evening classes, find it necessary to continue and complete their education by mail.

Neglecting the extravagant claims made by some commercial schools of this type, the main objection to individual study at home has been the lack of classroom atmosphere and personal contact with the instructor. No matter how well written the text may be, there is always the possibility of a wrong interpretation by the student.

To overcome this objection, the DeForest's Training Division of the National School of Visual Education have prepared a series of motion picture films which are supplied to each student together with a small but efficient projector. The arrangement of the films and design of the projector are such that the student has a combination of stereopticon and motion pictures available. In fact, any individual frame of the film can be studied for any length of time.

In addition, each film is accompanied by a "Reel Lesson" which not only gives a detailed synopsis of the subject matter but tells the student where to



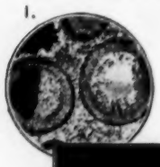
Equipment Furnished for Home Study

run the projector fast, slow, stop or reverse in order to obtain the greatest possible information. In addition, references are made to the regular text material, the explanation of which is supplemented by the films.

For example, in the subject of Radio, a judicious selection of photography and animated diagrams allows the student to not only see the actual equipment in operation, but also to follow the action by diagram. Thus, the usual classroom lecture is duplicated in the student's home but he has the completed lecture in printed form and thus need not take notes. He can see a much greater variety of equipment than the usual classroom has available. He has full benefit of the instructor's blackboard sketches with the added advantage of seeing them in finished and animated form.

Thus, the combination of carefully written texts and specially prepared films gives the home study student as many, if not more advantages than the regular student. This type of instruction was not only originated but has been used exclusively by the National School of Visual Education and DeForest's Training for about five years and has proven a most efficient method of teaching such technical subjects as Electricity, Radio, "Talkies" and Television.

1.



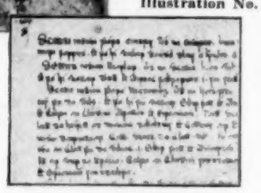
Every Photographic Need Served by One Camera!

2.

3.

Here are demonstrated a few of the many educational uses of the **LEICA Camera.**
Illustration No. 1 is a **photomicrograph** made by attaching the LEICA Camera to a microscope. Albert Johannsen, Professor of Petrology, says: "I find that I can not only take the photomicrographs much more quickly with a Leica Camera than with a larger instrument, but that the resulting photographs are uniformly better."
Illustration No. 2. The "Wolf-Spider". This remarkable close-up by James M. Leonard was made with the LEICA Camera and Copying Attachment. An example of LEICA's value in the teaching of science.
Illustration No. 3. An example of LEICA photography in the research work conducted by M. J. Dorsey, Chief of Pomology, University of Illinois College of Agriculture.
Illustration No. 4. Section of a manuscript copied with the LEICA Camera and copy attachment. Dr. D. L. Bendikson of the Henry E. Huntington Library and Art Gallery, San Marino, Calif., uses the LEICA for the reproduction of books and manuscripts; for the making of colored lantern slides; for photomicrography as well as all general photography.

4.



The LEICA Camera has 7 interchangeable lenses and nearly 300 accessories which adapt it easily to any photographic requirements. LEICA's negatives may be printed on positive film for projection. The UDIMO Universal Projector, for all single frame, LEICA double frame, 3x4 cm. film and glass slides, is specially recommended.

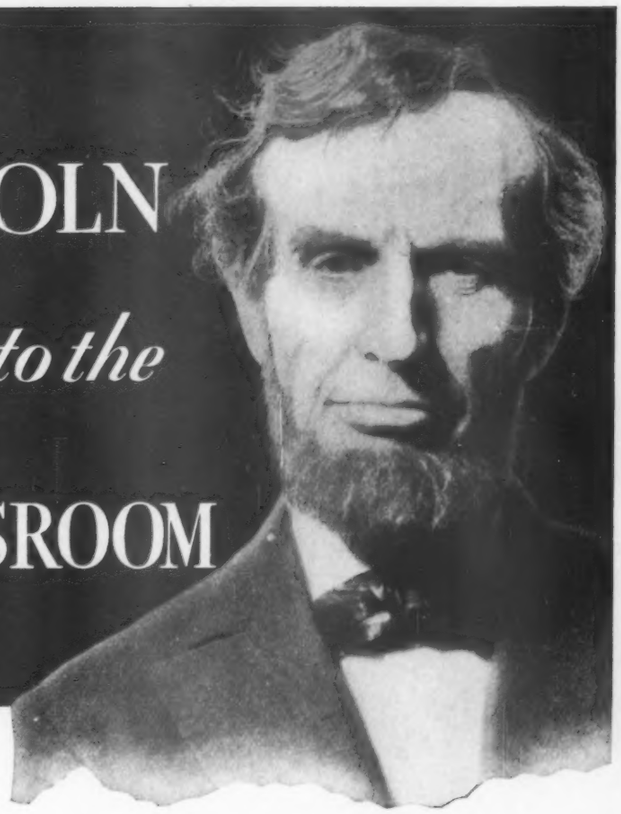
AUTOFOCAL CAMERA Leica

The Leica takes up to 36 pictures on a single roll of cinema film. **Built-In Short Base Range Finder** gives you perfect focus without guessing. Focal Plane Shutter gives you speeds of 1/20th to 1/500th second, and takes the fastest action pictures without blur. Easy and quick to operate. LEICA is small, compact, weighing only 19 oz.; can be conveniently taken anywhere. Price with 50 mm. ELMAR f:3.5 lens, $92.50. 2 year guarantee certificate.

Write for Free Illustrated Booklet —"Why LEICA?" Monthly bulletin, "Leica Photography", sent to all registered LEICA owners.

E. LEITZ, Inc., Dept. 257
60 EAST 10th STREET NEW YORK

LINCOLN *comes to the* CLASSROOM



. . . in a stirring 2-reel motion picture prepared especially for the school children of America

ANOTHER great historical motion picture by Eastman Teaching Films, Inc., gives living meaning to a great American personality.

The title role of this new release, *now ready for delivery*, is played by George Billings—undoubtedly the most outstanding impersonator of Lincoln. Endowed with a striking likeness to the great president, and fortified by exhaustive study of his life and character, Mr. Billings not merely *acts* the part of Lincoln—he *is* Lincoln.

The picture is completely authentic from beginning to end. Seeing it, pupils will re-live Lincoln's life as a vivid, first-hand experience. Not only will it supplement other teaching material for the classroom study of the Great Emancipator's life and times, but it will also serve to inspire character and patriotism in the heart of every child, from the lowest grade to the highest.

The Eastman Classroom Film, *Abraham Lincoln*, consists of two reels. Their total running time is about 30 minutes, so that they can be shown in the usual class period. Prices (delivered): 16-millimeter, $70 complete; 35-millimeter, $150 complete. Not available on the rental plan. For prompt delivery, send your order *now*. Eastman Teaching Films, Inc. (Subsidiary of Eastman Kodak Company), Rochester, New York.

Inexpensive Kodascopes, for projecting Abraham Lincoln and other Eastman Classroom Films, can be obtained from dealers everywhere. Screen costs are nominal.

Young Lincoln's stepmother shows interest in his "sums"

The future president as clerk in Offut's store

"Honest Abe" meets Douglas in fateful debate

Battle scene in the war between the states

"Fourscore and seven years ago"...the immortal address

Lee surrenders to Grant at Appomattox

EASTMAN *Classroom* FILMS

AMONG THE PRODUCERS

Where the commercial firms — whose activities have an important bearing on progress in the visual field — are free to tell their story in their own words. The Educational Screen is glad to reprint here, within necessary space limitations, such material as seems to have most informational and news value to our readers.

Self Liquidating Visual Education Equipment

Herman A. DeVry, Inc., calls attention to a phase of school financing which seems to be of great importance to progressive schools in these times of depleted funds, namely, the Self Liquidating Character of a type of School Talkie Equipment, which is capable of giving shows of regular theatre quality. Since this is the 35 mm. sound-on-film type of equipment, it can use the better features made by the big producers. They attract larger crowds than the usual school audiences, and at small admission fees, a few shows soon raise enough money to pay for the equipment.

After this period of "self liquidation", the equipment becomes the easiest of all means to raise money for other worthy purposes. Most other types of school entertainment, such as concerts, and school plays, require long periods of rehearsal, and some expense in the way of costumes and scenery. The "talkie" has a complete program of the most elaborate entertainment, both music and action, already on the film itself, and at the touch of a button, the riches of modern opera may be poured upon a delighted audience for an hour or more. A number of high schools have bought this equipment, and all of them report that the liquidation came through successfully, or that it is rapidly coming through. And the attendance has increased, instead of decreased, as the shows continued—which, in these times, is "news".

However, if these were all the possibilities of this equipment, it would not be justified as school equipment. The advantage of the arrangement is that such equipment is equally of value for more strictly educational purposes, either in the classroom or auditorium.

Undoubtedly, certain silent films of unusual educational value will survive; but most of them have had their day. The "Talkie" now has the call, and schools, ever alert to use the most up-to-date instruments of instruction, must inevitably equip themselves to handle the new vogue in "talkies". Now that they can do this, without spending regular school funds, they are indeed fortunate, and may thus find the depression a real stimulus to discover methods of self help and independent resource, which they did not know they possessed.

The DeVry Company has just published a booklet—"Raising Funds with DeVry Talkies," which is free for the asking.

Increased Light for Eastman Projectors

The Eastman Kodak Company has announced the completion of two new 16-millimeter projectors with illumination, respectively, of 500 watts and 750 watts. The Kodascopes K, Models 50 and 75, as the new machines are designated, set new standards for projection brilliancy. The increased illumination and crisp focussing of the new projectors not only produce brighter, sharper pictures on average-size screens but also they permit projection on much larger screens, with Kodacolor movies as well as with black and white.

Outwardly alike, the new projectors are light in weight, smart in appearance, compact, and sturdy. They project 400 feet of film with a simple threading, and they rewind the film by motor in less than 30 seconds. Levers cause the film to reverse at will or to project a "still."

Despite their unusually brilliant illumination, the Kodascopes K do not overheat. A powerful fan, forcing a steady stream of air through a newly designed cooling jacket, keeps these projectors surprisingly cool at all times. In the case of the Model 75, a rheostat and an indirectly illuminated voltmeter protect against overloading the projection lamp, thereby increasing its life and yet assuring the full and correct amount of illumination.

Both models come equipped with a fast 2-inch projection lens. Lenses of other focal length, providing for longer or shorter "throws," are available as extras, as are the lens and filter necessary to equip the projectors for Kodacolor.

Leica Developments

A new model Udimo film slide and glass slide projector is now available from E. Leitz, Inc. This model includes several new devices which were lacking in older models, the most important change being the method of film transport. Another interesting feature is the fact that any of the Leica Camera lenses can be used as the objective in this projector.

Film slides of two popular sizes can be accommodated, the single-frame movie area (¾ x 1 in.) and the double-frame area (1 x 1½ in.). Besides this, the increasingly popular glass miniature slides measuring 2 x 2 in. square. The use of these glass slides permits the making of slides from all miniature camera negatives direct, up to 3 x 4 cm. An automatic slide-changer is also available for use with the 2 in. square glass slides by means of which up to fifty slides can be shown in rotation without manual insertion of each slide.

E. Leitz, Inc., also announce a more extensive service bureau for Leica owners. This department will offer advice, suggestions, and answer any questions regarding the use of the Leica Camera. A helpful bulletin will be issued every month and sent to Leica photographers.

The service department will be under the direction of Willard D. Morgan and Karl A. Barleben, Jr., F.R.P.S., both well-known as authorities in photography. Mr. Morgan is a writer, lecturer, and photographer of note, while Mr. Barleben is well-known for his monthly departments in the various photographic magazines. Mr. Barleben, after having completed his sixth year as instructor of cinematography at the New York Institute of Photography, has accepted the post offered by the new service department.

This service is unique in that it is one of the very first of its kind to be sponsored by any firm. Those interested in this project and desirous of receiving the new bulletin will do well to write to E. Leitz, Inc.

S. O. S. Purchases Government Equipment

What is said to be one of the largest deals made in recent years on motion picture equipment was the recent purchase of projectors by the Sales On Sound Corporation, New York City, from the U. S. Government. This transaction represents the new policy of liquidation placed in effect by the Salvage Departments of the Army, Navy and Marine Corps.

The lot, it is said, consists of 76 Projectors of various types including well known makes such as Simplex, Holmes, Acme, Baird, and others. Most of these were in use by the U. S. Navy on ships that have been taken out of commission or shore stations that have been discontinued.

Upon arrival the machines will be immediately taken down, every part measured with micrometers, and any part not just properly lined up or fit to use in conjunction with a new one will be discarded, and the necessary parts supplied. All sprockets, gears, shoes, and intermittent cams will be replaced where necessary, so when these mechanisms are ready for the market, a one year guarantee against electrical and mechanical defects in material and workmanship will be placed upon the assemblies.

S. O. S. has one of the largest repair departments in the Motion Picture Industry, their plant being almost one city block long. More than half of it is devoted to reconditioning and rebuilding used apparatus that is purchased from time to time.

Bell & Howell Title Writer

For the amateur movie maker who wants to make professional-like film titles, including tricky animated ones, a new Bell & Howell Character Title Writer, for use with Filmo cameras, has just been developed.

For making the movable-letter animated titles which have become so popular, the new Title Writer may be used in a vertical position. The letters may be moved at will on the then horizontal title card. They do not have to be fastened to the card or otherwise supported.

This new unit makes use of two 100 watt, 110-115 volt lamps that are silvered on one side, and so provide their own reflectors. Also, the lamps are of a more or less spherical form, which affords necessary ventilation around the filament to permit their use in the horizontal position which the lamps assume when the Title Writer is used vertically. The new model can be used in a horizontal position for filming ordinary titles. There is also provision for the angle position for titles which show the hand as it writes.

Educational Field Representatives Wanted

For home study courses in Radio, Talkies and Television. Taught by motion pictures in the student's home. Full or part time. Courses are easy to sell, liberal commission.—Write to **DeForest's Training, Inc.,** 1109 Center St., Chicago, Ill.

New Portable Public Address System

The development of a portable "public address" system which provides improved quality of reproduction, simplicity of operation and is housed in a single self-contained carrying case, has been announced by the RCA Victor Company.

The new apparatus, according to the announcement, was designed to fulfill the varied requirements of an increasingly wide field of application for public address and sound reenforcement systems. In addition to the usual public auditorium and banquet work, modern sound reenforcement systems are called upon to augment the volume of an orchestra or of a stage presentation in the theater, or concert hall. They also provide facilities for making announcements and for paging work in schools, large industrial organizations, or wherever sound is to be picked up at its source, amplified and projected to either a collective or individual audience.

The new "velocity" ribbon microphone, radically different in principle from all previous microphones, is an integral part of the new RCA Victor system. Heretofore, this microphone has only been available for the delicate sound work in connection with motion picture and high quality disc recording. It is provided with an adjustable desk or table stand. The amplifier is an exceptionally "high gain" unit utilizing Class "B" amplification and providing an output of 20 watts. Two electrodynamic type loudspeakers are mounted behind grilled openings in the front half of the carrying case, with a 30-ft. extension cable which, together with the 30-ft, cable connected to the microphone, permits of placing the loudspeakers at any desired point from the microphone.

HERE THEY ARE!

A Trade Directory for the Visual Field

FILMS

Bray Pictures Corporation (3, 6)
729 Seventh Ave., New York City.

Carlyle Ellis (1, 4)
53 Hamilton Terrace, New York City
Producer of Social Service Films

Eastman Kodak Co. (4)
Rochester, N. Y.
(See advertisement on outside back cover)

Eastman Teaching Films, Inc. (1, 4)
Rochester, N. Y.
(See advertisement on page 93)

Edited Pictures System, Inc. (1, 4)
330 W. 42nd St., New York City

General Electric Company (3, 6)
Visual Instruction Section,
Schenectady, N. Y.
(See advertisement on page 90)

Ideal Pictures Corp. (1, 4)
26 E. Eighth St., Chicago, Ill.

Modern Woodmen of America (1, 4)
Rock Island, Ill.

Pinkney Film Service Co. (1, 4)
1028 Forbes St., Pittsburgh, Pa.

Ray-Bell Films, Inc. (3, 6)
817 University Ave., St. Paul, Minn.

Society for Visual Education (1, 4)
327 S. LaSalle St., Chicago, Ill.

United Projector and Films Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Universal Pictures Corp. (3)
730 Fifth Ave., New York City
(See advertisement on page 66)

Wholesome Films Service, Inc. (3, 4)
48 Melrose St., Boston, Mass.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

Y. M. C. A. Motion Picture Bureau (1, 4)
347 Madison Ave., New York City
19 S. LaSalle St., Chicago, Ill.

MOTION PICTURE MACHINES and SUPPLIES

Ampro Projector Corp. (6)
2839 N. Western Ave., Chicago, Ill.

Bass Camera Co. (3, 6)
179 W. Madison St., Chicago, Ill.
(See advertisement on page 90)

Bell & Howell Co. (6)
1815 Larchmont Ave., Chicago, Ill.
(See advertisement on inside back cover)

Eastman Kodak Co. (4)
Rochester, N. Y.
(See advertisement on outside back cover)

Edited Pictures System, Inc. (1)
330 W. 42nd St., New York City

H. A. DeVry, Inc.
1111 Center St., Chicago, Ill.
(See advertisement on page 89)

Ideal Pictures Corp. (1, 4)
26 E. Eighth St., Chicago, Ill.

International Projector Corp. (3, 6)
90 Gold St., New York City

Motion Picture Accessories Co. (3, 6)
43-47 W. 24th St., New York City.

Regina Photo Supply Ltd. (3, 6)
1924 Rose St., Regina, Sask.

United Projector and Film Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Victor Animatograph Corp. (6)
Davenport, Iowa.
(See advertisement on inside front cover)

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

SCREENS

Da-Lite Screen Co.
2721 N. Crawford Ave., Chicago
(See advertisement on page 65)

Motion Picture Accessories Co.
43-47 W. 24th St., New York City.

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

SLIDES and FILM SLIDES

Conrad Slide and Projection Co.
510 Twenty-second Ave., East
Superior, Wis.

Eastman Educational Slides
Iowa City, Ia.

Edited Pictures System, Inc.
330 W. 42nd St., New York City

Ideal Pictures Corp.
26 E. Eighth St., Chicago, Ill.

Keystone View Co.
Meadville, Pa.
(See advertisement on page 66)

Radio-Mat Slide Co., Inc.
1674 Broadway, New York City
(See advertisement on page 91)

Society for Visual Education
327 S. LaSalle St., Chicago, Ill.

Spencer Lens Co.
19 Doat St., Buffalo, N. Y.
(See advertisement on page 88)

Victor Animatograph Corp.
Davenport, Iowa.
(See advertisement on inside front cover)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

STEREOGRAPHS and STEREOSCOPES

Keystone View Co.
Meadville, Pa.
(See advertisement on page 66)

STEREOPTICONS and OPAQUE PROJECTORS

Bausch and Lomb Optical Co.
Rochester, N. Y.
(See advertisement on page 91)

E. Leitz, Inc.
60 E. 10th St., New York City
(See advertisement on page 92)

Regina Photo Supply Ltd.
1924 Rose St., Regina, Sask.

Society for Visual Education
327 S. LaSalle St., Chicago, Ill.

Spencer Lens Co.
19 Doat St., Buffalo, N. Y.
(See advertisement on page 88)

Victor Animatograph Corp.
Davenport, Iowa.
(See advertisement on inside front cover)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

REFERENCE NUMBERS

(1) indicates firm supplies 35 mm. silent.
(2) indicates firm supplies 35 mm. sound.
(3) indicates firm supplies 35 mm. sound and silent.
(4) indicates firm supplies 16 mm. silent.
(5) indicates firm supplies 16 mm. sound.
(6) indicates firm supplies 16 mm. sound and silent.

IS YOUR firm represented here? It should be. Continuous insertions under one heading cost only $1.50 per issue; additional listings under other headings, 50c each.

IF Users of the FILMO School Projector
wrote B.&H. advertisements

Finest Picture Quality

THE TEACHER—"We have always depended for the theater-quality reproduction of our school movies upon Filmo School Projectors; the pictures are brilliant, flickerless, and *professional* in every way—thanks to this splendid equipment."

Low First Cost

THE PURCHASING AGENT—"After you've examined and tested hundreds of kinds of school equipment, a decision on Filmo Projectors comes quick and easy—because you have the last word in quality, along with a price that means the last word in *value*."

Lowest Cost Per Production Year

THE COMPTROLLER—"All our conceptions of depreciation and upkeep on school equipment have to be revised when it comes to setting up reserves on Filmo Projectors. I've never seen a device that—over a period of years—costs so little and gives so much service in return."

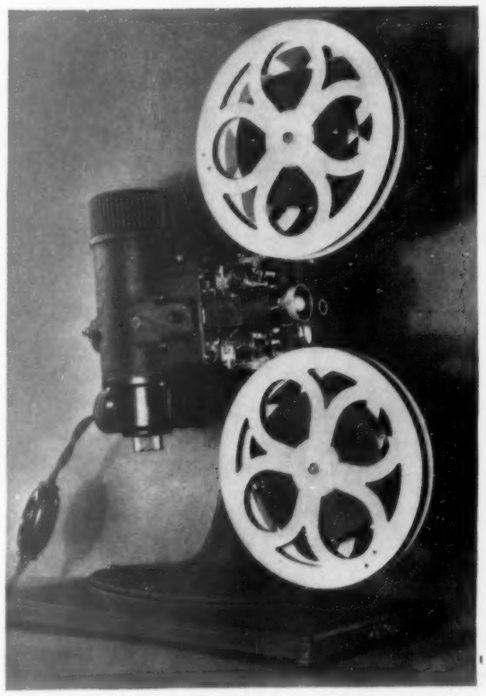
Simplicity

THE PUPIL—"Our teacher lets any of us kids run the Filmo Projector because it's so easy to do, and it's downright *hard* to do it wrong. Isn't it wonderful to have movies, just like you see in the theater, on a machine that *anyone* can operate?"

Constant Dependability

THE SUPERINTENDENT—"When things go wrong, they always fall on my desk for solution. But there's one kind of equipment in our schools that never gives us a moment's care—and that's our Filmo Projectors. Some of them are pretty old, but they're just as dependable today as they ever were."

—and Bell & Howell merely adds this fact—the Filmo School Projector is the result of its maker's 26 years of leadership in supplying Hollywood and other film producing centers of the world with professional cine equipment, and ten years of experience designing and manufacturing 16 mm. equipment which has come to be recognized, in schools and elsewhere, not only as the world's finest movie equipment, but foremost among the world's great achievements in precision machinery.



The Filmo Model M School Projector, with 300-watt illumination, complete with case, $135. With reverse lever and starting clutch, $150. 400-watt illumination, $14.50 additional.

Filmo JL Projector, including every refinement yet developed for 16 mm. projection, and powered to give theater-quality pictures on an auditorium screen, $298.

BELL & HOWELL

FILMO

Personal Movie Cameras and Projectors

Bell & Howell Co., 1817 Larchmont Ave., Chicago, Ill.
Gentlemen: Please send me complete information on ..... Filmo Model M Projector ..... Filmo Model JL Projector ..... Booklet "Filmo Motion Pictures in Visual Education."
Distance from back to screen in our auditorium .....

Name .....
Position ..... School .....
Address .....
City ..... State .....

PROFESSIONAL RESULTS WITH AMATEUR EASE

NO OTHER TYPE OF FILM WILL DO

» » » THE safety of your audience, your building, and yourself, calls for the sort of protection which Eastman Safety Film affords. Besides, underwriters' requirements specify that only film of this type shall be used for unenclosed projection. No other type will do. Specify Eastman Safety Film every time you order motion pictures, and look for the words *Eastman---Safety---Kodak* throughout the margin of each reel before projecting. Eastman Kodak Company. (J. E. Brulatour, Inc., Distributors, New York, Chicago, Hollywood.)

EASTMAN

SAFETY FILM